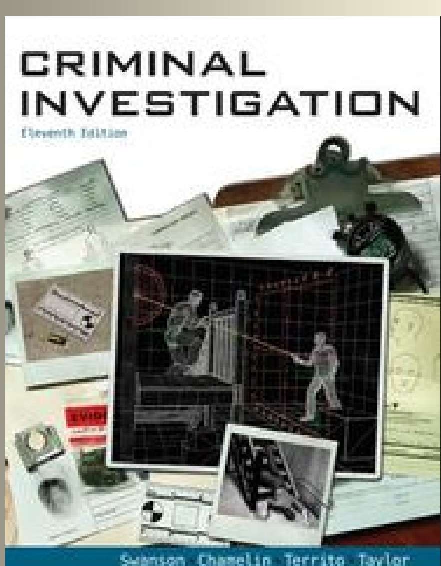
Fundamentals of investigation, crime scene search and recording, preliminary investigation of physical evidence, modus operandi, sources of information, interviews and interrogation, follow-up investigations.

Criminal Investigation

AJ005-28154



Bertrand Blanc – Sept./Dec. 2013

Table of Contents

The Evolution of Criminal Investigation and Forensic Science

1. Why did the British public object to the use of detectives after enactment of the Metropolitan Police Act of 1829?

The British public objected to use of detectives after the enactment of the Metropolitan Police Act of 1929 because they were suspicious and even hostile to this new force due to the oppression that their French neighbors endured under centralized police.

2. What are the three methods of biometric based personal identification? Describe each.

The three biometric-based personal identification methods are:

1. **Anthropometry** is the study of human being physical characteristics measurements, developed by A. Bertillon around 1882. The hypothesis was that human beings can be identified from a number resulting from the measurement of their physical characteristics. Bertillon reduced the model to 11 compounds like the height, the head length, the cheek width.
2. **Dactylography** is the study of the fingerprints, developed by Herschel & Faulds (1858), Galton (1888), Vucetich (1894) and Henry (1897). The hypothesis is that human beings can be identified by their fingerprints. Different systems were developed based on the three basic patterns arch, loop and whorl.
3. **DNA (deoxyribonucleic acid)** is the study of the genes, developed by Jeffreys in 1985. The hypothesis is that human beings can be identified thru this *chemical blueprint* which is present in any live cells like tissues, saliva, hair root, blood, spermatozoa, bone marrow, tooth pulp.

3. Why does the Henry classification system enjoy greater use than Vucetich's system? Provide at least two websites that discuss the Henry System of fingerprint classification.

Despite both Henry and Vucetich's system fingerprint system gained international recognition, it appears that Henry's system might had gained more momentum due to reasons which appear to me to be more political than scientific. According to the class book, Vucetich's was humiliated by Bertillon and his system poorly implemented in Buenos Aires. Au contrary, Henry was close to Galton who provided him all researches from Herschel and Faulds: his method was implemented in India by his police officers and hence gained recognition in Europe.
Nonetheless, according to *Systems of Friction Ridge Classification* from Laura Hutchins (https://www.ncjrs.gov/pdffiles1/nij/225325.pdf) both systems were recognized, implemented and led to enhanced modern models: 12 derive from Henry (including the FBI Extensions) and 18 from Henry-Vucetich.

Fingerprint Classification Using Orientation Field Flow Curves from Sarat Dass and Anil Jain (http://www.cse.msu.edu/biometrics/Publications/Fingerprint/DassJain_FPClassifyOFFC_ICVGIP04.pdf) proposes an automatic approach to identify the geometric characteristics of ridges.

The Automated Fingerprint Identification System (AFIS) also seems to have inherited from Henry's system (https://www.ncjrs.gov/pdffiles1/nij/225326.pdf)

4. What was the process used by the British police to catch the killer in the *Footpath Murders*? Explain how the suspect was finally identified.

The process used by the British police to catch the killer was long, fastidious and very innovative. They processed the Lynda 1st scene crime, gathered the facts on her death including modus operandi and blood type from the murderer present in 10% of the population. The murderer was profiled as a man with a normal life with family and friends. The people around were questioned. They video-taped the people coming to the burial since the murderer may come back to the crime scene or in any related event.

It was a dead end after 3 years. Two weeks sounds to be the timetable for people to remember and to cooperate.

Then Dawn was found dead, the crime scene was processed. A pattern emerged between Dawn and Lynda's cases: same location, young women, rapped, strangled, walking alone. The same blood type was found.

The police run a large investigation, found a witness and identified Richard Buckland, a cook from the psychiatric hospital who knew details which were not in the newspaper. After 15h of interrogation he confessed Dawn's murder but denied Lynda's one. The police wanted to arrest him for both murders since they knew both victims presented the same pattern.

They contacted a geneticist, Alec Jeffreys, from the University of Leicester. He is working on DNA for genetic profiling. DNA is vaguely known at that time as *genetic fingerprint*. RFLP technique is used to identify individuals from a small sample of cells. This would be the first time in the history that a killer would be identified using DNA.

Jeffreys analyzed the blood samples found on the two victims to compare it with Richard's. Both victims were raped by the same man (and probably also strangled by the rapist), and both were also not rapped by Richard.

Richard was the first person in the world who was freed thanks to a DNA sample. The fact he knew details which were not in the newspaper tells that he saw the dead body. (As a side note, I'd be interested to know why he confessed).

A big *DNA manhunt* was run asking men to volunteer for DNA check. 5,000 men gave a sample and none of them matched the DNA from the killer. Since the police believed that the killer was a local inhabitant, there's something fishy here.

One year later, a woman overheard a conversation in a bar where a man, Calley, bragged about how he fooled the police by giving his blood/saliva in place of Peachfork. She alerted the police.

Peachfork believed in DNA identification and convinced Calley to give a sample, providing him a forged ID card. Peachfork immediately confessed because he knew DNA would match him. He was 28 years old, married, two children, able to deceive everybody: serial killers are never suspected. As a personal note, knowing the PCL-R Hare Psychopathy checklist helps to identify "interesting" profiles, like Seductive Operational Bullies aka Psychopath Lite in the workplace.

As a conclusion, Richard was cleared by DNA, and Peachfork identified through three basic elements: the time, and two human nature traits: curiosity (overhearing strangers' conversations) and ego (bragging).

5. Explain the crime and investigation from the *To Catch a Killer* video. What is the favorite interrogation technique that investigators like to use?

Michael D. Claggett and Denise R. Holsinger, his girlfriend, planned to rob the bar, the Witchduck Inn in Virginia Beach, in which Holsinger used to work as a waitress. They killed 4 people (the owner, the waitress, the cook and a client) to prevent her to be recognized by her former employer and staff members. One of the victims was a client. They rob $400.

The investigation was run in 6 steps that I noticed:

1. The police secured the area (they sounded overwhelmed by the crime scene)
2. They collected evidences (pictures, dusted the counter top)
3. They interrogated the people around the crime scene, focusing on singular behaviors
4. They got a few leads emerging: the fired waitress (Holsinger) and the weird passer-by from step #3 (Claggett)

5. They interrogated deeper and individually Holsinger and Claggett *playing a psychological game to filter lies from the truth*. Finally, Holsinger confessed she robbed the bar while Claggett shot in the head the four victims
6. The rights were read before being formally inculpated and the arrest paperwork filled out, so that the procedure is followed

The favorite interrogation technique seemed to me to be the lie "*we know all*". It appeared to me that Claggett confessed the killings almost immediately when the interrogator told he had him on tape because a video camera was installed.

According to *How To Spot A Liar* from G. Hartley & M. Karinch, "*we know all*" is one of the eleven interrogation approaches. I noticed that the interrogators subtly used 8 of them that I can recall.

1. Direct: just ask the question (like the 5W's to both Holsinger and Claggett)
2. Incentive: offer the source a bribe (like a cigarette to Claggett)
3. Emotional: using strong emotion against the source (like telling Claggett Holsinger told it was him)
4. Fear-Up: yelling, intimidating (the interrogator yelled at Holsinger once)
5. Fear-Down: you pat and console the terrified source (the environment was setup that way)
6. Pride and Ego: up or down (I don't recall the usage of any of them)
7. Futility: cultivating doubt, nothing could have been done to prevent the capture
8. We know all: pretend you know the truth (like the video camera with Claggett)
9. Repetition: repeating the same question (like finding Holsinger lies by crossing the answers)
10. Establish the Identity: it was not directly used, although Holsinger was found using this method
11. Rapid Fire: asking many question without giving the time to answer to increase the level of stress

<u>Note:</u> As the investigators pointed out I was wondering why they didn't steal the tips and personal effects from the 4 people, including the purse of the waitress. She might have wanted to revenge for having got fired. I was also wondering whether Claggett was not manipulated by his girlfriend: urging him to "do it" sounds to me to be a peer pressure, used by a sociopath woman on a man who seemed really stupid.

<u>Note:</u> I find the interrogation room very interesting, I was wondering if it was purposely setup that way. Allan & Barbara Pease in The Definitive Book of the Body Language talked about

- the position of the interlocutor sitting around the corner of the table to create rapport but still be secure
- the interrogator sits in a chair whereas the interrogatee sits in an armchair feeling more important
- the interrogatee sits with a wall in the back (instead of a door) so that he feels secure
- to create a safety environment, there's only one interrogator at a time (we saw that 2 didn't work)
- the interrogator leans forward willing to show that he's interested in what the interrogatee has to say
- 2 times the interrogator showed his superiority though: putting his waist, and leaning backward swiveling in his chair (the swivel chair might have not been a good idea)
  - The interrogators had a direct view on the interrogatees full body, especially the hands, legs and feet, the hands may be controlled, however the feet are unlikely (the further from the brain, the most complicated it is to control the limbs)

1. **Define** "investigator."
   An investigator is someone who gathers documents, and evaluates evidence and information.

2. **Define the most fundamental purpose of investigation.**
   The most fundamental purpose of investigation is to discover the truth.

3. **State four additional objectives of the investigative process.**
   Four additional objectives of the investigation process are: (i) establish that a crime was actually committed, (ii) identify and apprehend the suspect/s, (iii) recover stolen property and (iv) assist in the prosecution of the person/s charged with the crime.

4. **Explain the importance of the Bow Street Runners.**
The Bow Street Runners was the 1st modern detective force created in England in the XVIIIth century which was the roots of criminal investigation. They were non-uniformed home owners hurrying to crime scenes to begin investigation.

5. **Discuss the contribution of Sir Robert Peel's reform to early policing in the United States.**
The success of Peel's reform in England didn't go unnoticed in the US and drove some metropolitan areas to follow Peel's recommendations like Philadelphia, New York, Chicago, New Orleans. The New-Yorkers were initially adamant to have such a centralized repressive organization, like English were: however, the rigor and high level standards that Peel observed for his organization may have helped to measure the benefits.

6. **Explain the history and contributions of the Pinkerton National Detective Agency.**
Allan Pinkerton founded a private detective agency in 1850 and known throughout the world. The Pinkerton's agents (called the Pinkertons) were reliable investigators and had unrestricted jurisdictional limits. They used information, photographs, records and publicity as tools, especially for identification purposes. They provided a good model for government detectives (despite sometime the usage of unorthodox methods).

   He discovered and foiled an assassination attempt on President Lincoln, he organized a Secret Service Division during the Civil War, he infiltrated the confederated lines. After the Civil War the Pinkertons controlled a discontented working class and pursued bank and railroad robbers. The usage of the photography and their record led to the arrest of Reno's gang. They manipulated Butch Cassidy and the Sun Dance Kid to leave the USA.

7. **Identify the first major federal investigative agencies and their responsibilities.**
In 1865 Congress created the US Secret Service to combat counterfeit.
In 1905 the California Bureau of Criminal Identification was setup to share information about criminal activities.
In 1908 the embryo of the Federal Bureau of Investigation was created to handle federal investigations.
In 1920 the Bureau of Internal Revenue was responsible to enforce Prohibition.

8. **Explain the Supreme Court's "due process revolution" and its impact on policing.**
The Supreme Court became active in hearing cases involving the rights of criminal suspects and defendants in two areas: (i) search and seizure, (ii) the right to legal representation. The former is basically the application of the 4th amendment of the US Constitution introduced in 1789, and the latter led to Miranda Rights in 1966.

   This led to drastically reduce the questionable and improper police procedures hence enforcing the professionalization of the police, the creation of real trainings and procedures, in the spirit of Sir Robert Peel *requiring officers to maintain high standards of conduct*.

9. **Discuss Bertillon's method of anthropometry**

Bertillon method of anthropometry aims at measuring 11 human being characteristics for identification purposes, like the height, the outstretched arms, the trunk, the head length, the head width, the cheek width, the right ear, the left foot, the left middle finger, the left little finger and the left forearm. The sum of all these measurements is expected to be a "magic key" to identify an individual.

This method can definitively give great insights to narrow down the researches, but is definitively not a bullet proof method to unambiguously identify a person, like the William West case highlighted in 1903. Both Will and William West with very similar measurements were imprisoned at the same time at the Leavenworth Prison. (Personal note: it would be interesting to compare their DNA because if they have any family relationship, Bertillon's method may still be interesting…).

10. Summarize the historical development of fingerprint identification.

- In 1877, Herschel figured out that the patterns of lines on the fingerprints never changed for an individual, hence could be used for identification.
- Before 1880, Henry Faulds used fingerprints to identify that a person in custody was not the theft, he published his findings in 1880.
- Nobody was interested in their findings.
- In 1892, Galton published the first definitive book on dactylography, taking as inputs Herschel & Faulds inputs.
- In 1894, Juan Vucetich published a method of fingerprint classification.
- In 1900, Edward Henry fingerprint classification system was adopted in England, inspired by Galton's book.
- In 1904 NYC Detective Sergeant Joseph Faurot was sent to England to study Henry classification system. Back to the USA, despite he was asked to forget about it, he identified a thief with his fingerprints.
- In 1903 Will West and William West were distinctly identified with their fingerprints since they had similar Bertillon's profiles.

11. Explain the concept and practice of DNA typing.

http://learn.genetics.utah.edu - The DNA is what encodes any form of life on Earth. The DNA is passed from parents to child: 50% coming from the father and 50% from the mother. All human being share 99.9% of the same DNA, each person unique identity resides in the remaining 0.1%. Human have four different methods of inheritance associated with different DNA types:

a. Autosomal : non sexual chromosomes passed by both parents to the children
b. X-chromosome : unique X-chromosome from the father passed to his daughter, and 1 X-chromosome from the mother passed to the children
c. Y-chromosome : unique Y-chromosome from the father passed to the son
d. Mitochondrial : passed only from the mother to the children

12. Outline the milestones in the development of firearms identification.

In the USA, the frequency of shootings has made firearms identification important to identify bullets, ammunition, …

1. In 1835, Henry Goddard noticed a defect on a bullet and the same defect on a mold found in a suspect's house.
2. In 1889, Pr. Lacassagne identified the gun of a suspect based on a bullet found in a corpse.
3. In 1898, Paul Jeserich took microphotographs of a lethal bullet and a bullet shot from a defendant firearm and identified the same similarities and abnormalities.
4. In 1913, Pr. Balthazard published an article on firearms identification. He noticed that firing pin, breechblock, extractor and ejector leave marks on cartridges varying among different types of weapons.
5. Around 1920, Calvin Goddard raised the firearm identification to the science of ballistics. With Charles Waite, John Fisher and Phillip Gravelle pioneered the first firearm catalog.

Legal Aspects of Investigation
Investigators, the Investigation Process, and the Crime Scene

1. In your own words, describe the difference between inductive and deductive reasoning. Give an example of each.

Both reasoning need a collection of facts or evidence. These facts won't be used in the same way according to the reasoning style:
In inductive reasoning, the approach is bottom-up, pragmatic or empiric: the facts will lead to elaborate a model in which each of them perfectly fit
In deductive reasoning, the approach is top-down or cartesian: a working hypothesis is provided and checked against the facts, if the fact match then the hypothesis is verified, otherwise a new conjecture has to be provided iteratively.
Other reasoning style exists like meet-in-the-middle aiming at combining both bottom-up and top-down approach in order to speed up the discovery of the solution and to remove some biases. The *argument to absurdity* and *contraposition* are also used in mathematics or first order logics to resolve a problem and to discover the assumptions.

Both inductive and deductive reasoning are great reasoning mechanisms, but they have major drawbacks: the quality of the conclusion/solution depend on the quality and the quantity of the facts. For example in the *Wests case* the anthropomorphic measurements expected to identify a unique person which was falsified by the Wests, hence introducing the fingerprints as new fact allowed to unambiguously identify the Wests. As other example, the *Footpath Murders*, Richard was blatantly the guy, by introducing DNA, in fact he was not.

As a side note, my assumption is *collaborative design thinking process* could be used in criminal investigation: the idea is to have a group of investigators chosen according to different *personality type* (like Myers-Briggs) with different *thinking process*, using a *de Bono 6 Thinking Hats* method or other *creative processes* to find a solution in 1 hour. The major advantage is a quick turn-around-time since time is a key factor. Since I don't have any facts to backup this assumption, this deductive reasoning will stay at the stage of conjecture.

2. Explain the circumstances that would cause application of the "Fruits of the Poison Tree" doctrine.

The evidence obtained from an unreasonable search and seizure cannot be used as the basis for learning about or collecting new admissible evidence not known about before. All the evidence resulting from the discovery of these unlawful evidence are also tainted and shall be rejected.

3. Describe at least five circumstances that justify a search under exigent circumstances.

The emergency search i.e. search under exigent circumstances recognizes that a warrantless entry by law-enforcement officials may be legal when there is a compelling need for official action and no time to get a warrant.

1. *Danger of flight or escape*: to apprehend a suspect about to escape
2. *Loss or destruction of evidence*: to protect the chain of evidence
3. *Risk of harm to the public or police*: to protect the people, for example for a stop-and-frisk
4. *Mobility of a vehicle*: to perform the search to protect themselves or because the vehicle may be away while waiting for a warrant
5. *Hot pursuit*: to enter premises under emergency

These five circumstances have in common a character of emergency in order to protect the public, the police officers and the evidences: "protect and serve".
Note that these warrantless searches are lawful ground to seize any in-plain-view evidence.

4. Identify the primary requirement that makes a plain view seizure lawful.

If an investigator/office is lawfully in a place and sees contraband or evidence in plain view, the investigator may seize the evidence, and it will be admissible. It is crucial that the officer had a legal ground when he sees the evidence in plain view.

5. Explain the Bostick Case explained in the Search and Seizure video. Why didn't they get a warrant? What was the final outcome? (You may have to do some internet research on this one.)

The buses were searched for drug by the police officers of Fort Lauderdale, Florida. The search without warrant was granted under the Prohibition because a moveable vehicle could be gone before a warrant was issued, that's why these piece officers were regularly performing buses searches without a warrant. Bostick was in a bus stopping there, the two officers asked him to search his bag, and informed him of his rights to refuse the search, what he denied. They found 500 grams of cocain and he was convicted.

Bostick was not informed of his rights that he was not required to answer to the officers. Bostick felt intimidated by the two police officers which may be a foundation for coercive behavior hence tainting the acknowledgement to be searched. Bostick was also not free to leave since he was in a bus, if he had left, the bus would have left without him: he paid for the ticket and was hence entitled to get for what he paid.

The Florida Supreme Court adopted a per se rule that the practice of "working the buses" is unconstitutional. Because the opinion was limited to busses, police in Florida, as elsewhere, may approach persons at random in most public places, ask them questions and seek consent to a search, but they may not engage in the same behavior on a bus. (http://www.casebriefs.com)

Moreover, the two police officers didn't have any ground to suspect Bostick to carry drug, or even to feel threatened, under which extend the search and the seizure couldn't be considered as the fruits of the poison tree?

Physical Evidence

1. From the video, List the five mistakes made by LAPD officers investigating the Nicole Simpson murder.

Thomas Mauriello presented five mistakes the police officers did at Nicole's house:

1. They took a blanket from the couch to cover Nicole's body from the public against the rule not to take anything from the crime scene. Some hairs from OJ were found on Nicole, the defense alleged that the hairs came from a transfer from the blanket: the possibility was plausible
2. The public was staring at the scene and started collecting objects whereas the police was expected to secure the crime scene and to protect evidence

Identifying the time when the murder happened is very difficult, then any piece of evidence from the crime scene is crucial:

3. Police officers blew up some lit candles without noting the time
4. They didn't note the temperature of the water in the bathtub
5. There was some ice cream on the scene, the officers didn't note the state of this ice-cream

I noted that the police officer confessed they didn't receive adequate training at the Police Academy to be aware of what forensic would need to connect the dots: with more time and more money, I guess that further training could be provided.

However, I don't understand why the crime scene was not secured to protect the evidence and why they touched objects (the blanket) inside the house. What were passerbys doing in the house? How come they were able to take objects? Besides the protection of the evidence, on a security standpoint, what if there was a booby trap under the blanket?!

2. How do you collect bite mark evidence?

Bite mark collection shall be quick because they deteriorate quickly.

1) Document the mark using color photography
   a) General view to establish where the mark are located on the victim
   b) Medium range photographs with and without American Board of Forensic Odontology #2 scale
   c) Close-up photographs with and without ABFO #2
2) DNA collection
   a) Swab the center of each bite mark twice with sterile cotton swabs moisturized with distilled water
   b) Cotton swabs air dry
   c) Packaged in paper envelop, sealed and marked
   d) Process the clothing if the bite mark occurred thru the clothing
3) Reference for self inflicted bite mark when the marks are within reach of the victim's dentition
   a) Cast of the victim dentition
4) Bite mark impression
   a) using dental grade silicon impression material
   b) if the victim is deceased, the block of tissue containing the mark is attached to an ad-hoc ring to keep the size and the contour of the bite mark, is removed and preserved in formalin

http://www.crime-scene-investigator.net/evidenc3.html - *They should be photographed using an ABFO No. 2 Scale with normal lighting conditions, side lighting, UV light, and alternate light sources. Color slide and print film as well as black and white film should be used. The more photographs under a variety of conditions, the better. Older bitemarks which are no longer visible on the skin may sometimes be visualized and photographed using UV light and alternate light sources. If the bitemark has left an impression then maybe a cast can be made of it. Casts and photographs of the suspect's teeth and maybe the victim's teeth will be needed for comparison. For more information consult a forensic odontologist.*

3. How do you collect fresh and dried blood from a person?

Collection of fresh blood from a person:
1) Absorb it on a clean cotton cloth or swab

Collection of dried blood from a person:
1) Used distilled water to moisten a cotton cloth or swab
2) Absorb the blood with the moisten surface

In both cases
1) Leave a portion of the cotton cloth or swab unstained as a control sample
2) Let the swab air dry naturally
3) Wrap the swab in clean, dry paper or place it in a paper envelope with sealed corners

4. In your own words, explain the *Helle Crafts* incident?

Helle Crafts, a mother of 3 children, suspects her husband to have an affair. She hires a private investigator who confirmed her suspicion. One night, she confronted her husband in the bedroom. He killed her with a blunt object and froze her in a freezer. He rent a U-Haul van and a woodchipper, drove to a bridge, dismembered her with a chainsaw and scattered her into the river with the woodchipper. He altered the chainsaw serial number and tossed it into the river.

The private investigator Helle hired to follow her husband reported her missing to the police. The husband was interrogated and successfully passed the lie detector. They searched the house, interrogated the nanny and found out that the bedroom carpet was changed after the nanny noticed a big stain on it.

A snowplow driver recognized Richard in the night and reported the fact. He drove the police to the bridge. They found there the chainsaw, the chain, an envelope with Helle name on it, a finger nail with polish on it, lot of hairs and many bone fragments.

The forensic were called to figure out whether Helle was dead through the story the evidence were telling. A colossal number of pieces of evidence was collected and analyzed (e.g. 2000+ hairs) by many different experts to find what happened as a team work.

- The forensic found 5 tiny stains of blood on the mattress, they analyzed their shape and figured out they hit the mattress at a 10 degrees angle
- These 5 tiny stains were fresh (pgm blood marker active up to 13 weeks), they were circulating blood (not menstruation) and type O (Helle's blood type)
- The towels have recently been washed but were full of blood stains (I guess they used Luminol)
- The family freezer disappeared
- The bones were analyzed, were human and belonged to a blood type O person
- The hairs found in the river and on the chain were compared to Helle's hairs found on her hairbrush and similar
- The nail polish found on the fingernail was chemically similar to Helle's nail polish
- Even though the chainsaw's serial number was altered, with a chemical, 5921616 appeared, linked to a guarantee card registers in Richard's name
- They put a pig in a woodchipper to experiment what could happen since pig and human-beings have very close bones and tissues characteristics. They discovered that a woodchipper has a specific signature.
- After 5 more days of research, they found a tooth which was the evidence proving that Helle was dead

Richard was convicted of having murdered his wife and condemned to 50 years of prison. It was the first case of conviction without a body. Richard claims his innocence.

5. In your own words, explain how *Donna Payant* was murdered and how her murder was solved?

Donna Payant, a 31 years old family mother and first prison guard woman and Green Haven Maximum Security Prison, was brutally murdered in prison. She was wrapped in a garbage bag and tossed in a prison garbage can. Her body was discovered in a dump, heavily mutilated due to the bulldozers. The autopsy revealed that she had her wrist ligatured, was sexually assaulted, bitten and strangulated.

The bite marks was sent to an expert in odontology. He definitely acknowledged it was a human bite pattern and identified this pattern as Lemuel Smith's dentition by measuring the spaces between teeth and their alignment.

After investigation, it was discovered that Lemuel was a Green Haven's inmate, the modus operandi was his (ligatures, sexual assault, brutality, strangulation, bite) and he knew Donna Payant. Smith also had the means and opportunity. He was left alone in the chaplain due to his good behavior, the floor was freshly cleaned but some hairs from Payant were found in a closet close-by. Smith also claimed to the psychiatrist that he would recidivate if he had the opportunity to.

Donna Payant's murder was solved by using a meet-in-the-middle reasoning which started with an inductive reasoning based on a bite mark: the assumption was Lemuel Smith was the perpetrator. It gave a direction to search and finally further evidence were discovered to corroborate the assumption (modus operandi, hairs, discussions with the psychiatrist).

On a personal note, I still have some unanswered questions:

- For a high security prison, how come that the phone call source was not traced (even in 1981)?
- He can claim whatever he wants to the psychiatrist, I don't really care: people lie or brag about all the time
- He admits to be a tough guy, he was sentenced for Payant's murder, then why does he deny?
- The guard admitted selling cocain to prisoners, why admitting that and especially at this moment?
- Smith's dentition and modus operandi was known, how difficult is it to fabricate it, especially when the corpse is exposed to so much filth?
- I'd like to know more about the illegal activities from the guards and how Payant's was perceived.

Bottom line is a psycho was condemned, the high integrity trouble maker Payant is dead, a guard was fired and maybe convicted and… everything is back to normal at Green Haven…

Interviewing and Interrogation
Field Notes and Reporting

1. What is the importance of information to the criminal investigator? How is information obtained?

The information is key to the criminal investigator in order to establish and to understand the sequences of events which happened in the past and which led to the crime under investigation. Not all information has the same weight: some has value like a video-taped confession which can be used in a court of law, some has less value like a hit which may help the investigator to assemble the puzzle, or even no value, not to say counter-productive, like false confessions.

The more information the investigator obtains, the more knowledgeable he is in order to catch the offender, ask the right questions, cross-checked the data and finally figure out the solution. The areas of knowledge shall be into the witnesses, the offense, the victim and the suspect.

Information is obtained through interviews or interrogation. Both of them require some preparation in terms of planning, controlling the surroundings, ensuring privacy, establishing rapport, asking good questions, empathizing, and documenting properly. The preparation is important to conduct a good interview to obtain information in a good will from the interviewees, however it is critical to successfully manage an interrogation, more likely in an hostile atmosphere, with the view to obtaining valuable facts, eliminating the innocent, identifying the innocent and obtaining a confession. As the value increases, the difficulty also increases: the preparedness, the skillset and the experience of the investigator hence makes the difference.

2. In evaluating the credibility of a witness, with what factors must the investigator be concerned?

During the preparation phase to interview a witness, the investigator shall be concerned by the psychological and physical capabilities of the witness in order to evaluate the level of value the information could have. The gender, age, expectations, intelligence, race and facial recognition skills of the witness are factors may influence the witness.

From a psychological standpoint, the investigator shall determine the motivations, the perceptions, barriers or biases that might exist. What could be the quality of the testimony from a WASP from Beverly Hills in the identification of an Ethiopian suspect when they visited the Ethiopian neighborhood in NYC? What is the value of the testimony of the Ethiopian salesclerk from the shop across the street? I guess we can have an idea about perceptions, barriers and biases: indeed more likely the Ethiopian clerk will be able to recognize somebody from his ethnicity, whereas the WASP will be more likely villainizing the "weird and scary black looking person". What if the WASP had an Ethiopian maid whereas the salesclerk appears to be the brother-in-law of the suspect? The motivations of the latter could now taint the value of his testimony.

From a physical standpoint, the investigator shall determine the infirmities that the witness may have impeding the value of his testimony even though he is bona fide: visual or hearing deficiencies, the competency of a witness about his mental health, the medicine, drugs or alcohol he might be under influence of. The language may also be challenging not only to communicate with the witness but also to evaluate the quality of the information if he needs to report a conversation he witnessed conducted in another language.

The quality of the observations of the witness are also a factor like the level significance of the event, the length of the period of observation, the conditions of observation, the expectancy, the surroundings and peers pressure. The way the interview is conducted may also influence the credibility of the witness, fatigue and anxiety may indeed help the interrogator to get more leaking cues, but it may also drive the witness into false confession to get some basic needs fulfilled like eating, resting, drinking.

3. Why do some people confess? Research (online) and define the terms, kinesics, linguistics, and proxemics. Explain how each relates to an interview and interrogation.

It's in human nature to talk. Most people cannot keep a secret. It was estimated that 80% of all people will confess a crime. There are 2 categories of people who tend to confess a crime: (i) guilty parties who psychologically need to "get it off their chest" and (ii) person who are not guilty but who act under some urge to confess.

Besides this natural willingness to confess, the level of interrogation skills of the investigator may also influence the suspect into mutism or false confession when coerce interrogator is used on vulnerable people. The interrogator shall hence acquire some skills in psychology, interrogation techniques and body language to catch the leaks from the suspect.

Kinesics, linguistics and proxemics are tools which help the measure the difference between was is said or induced in the words and what leaks from the body language. *Total Liking = 7% Verbal Liking + 38% Vocal Liking + 55% Facial Liking (Albert Mehrabian).*

Kinesics: *the study of body movements, gestures, facial expressions, etc., as a means of communication (dictionary.com).*
Barbara & Alan Pease, in the Definitive Book of Body Language, present basic body language patterns to be interpreted in clusters of 3. The position of the hands and the feet can be interpreted, the itchy sensations on the nose, the mouse, the ears, the head are induced by the brained and translated into a movement. Kids are easier to decipher because they have not acquired yet the protection mechanism that we are taught until the adulthood. An interesting statement is if we feel good in a position this means that our body is in-sync with our state of mind at this moment.
Paul Ekman, in Emotions Revealed, and further studies on the FACS system, introduced the 7 basic expressions that we can find in any culture: joy, anger, disgust, sadness, surprise, fear and contempt. The METT test helps in acquiring useful skill to catch such micro-expressions.

Linguistics: *the science of language, including phonetics, phonology, morphology, syntax, semantics, pragmatics, and historical linguistics (dictionary.com).*
Beyond this basic definition, I would say that the pitch of the voice may provide emotion leakage compared with the baseline, the phonology is particularly of interest, representing the 40% of vocal liking pointed out by A. Mehrabian.
Joseph O'Connor & John Seymour authored Introducing NLP (Neuro-Linguistic Programming), a psychological skill to understand and influence people. Some stimuli make us react in a deterministic way which is high-wired in our brain coming from the Darwinian evolution: an external cause will induce an internal consequence. NLP shows that this consequence can be used as a cause to induce a behavior.

Proxemics: *the study of the spatial requirements of humans and animals and the effects of population density on behavior, communication, and social interaction (dictionary.com).*
Barbara & Alan Pease, in the Definitive Book of Body Language, also address this sociologic aspect, in the USA the safety distance seems to be 17 inches, whereas in other countries this distance can be wider or shorter. Ron McMillan and co, in Crucial Conversations, highlight the importance to create and to nurture safety as a foundation in any high stake discussion.

4. What are the six primary interrogatory questions?

The 6 primary interrogatory questions are the "6WHs" or the "Wh questions"
1. **Who** are the stakeholders involved in the incident: the victim, the first respondent, the witnesses, the person who discovered or reported the felony, …
2. **What** has happened: the crime, the taken actions by the stakeholders, the knowledge of the witnesses, …

3. **Where** the event occurred: the discovery, the crime scene, the evidence, the movements of the stakeholders, …
4. **When** it happened: the discovery, the report to 911, the victim seen, and any events the stakeholders were involved in
5. **How** the events happened: the crime, the witnessed got the information, the arrest, etc
6. **Why** it happened: the reasons of the crime, the sequence of events, the report of the crime, the tools/weapons used, …

5. What is the difference between an interview and an interrogation? Explain the different settings that each should take place in.

Both interview and interrogation aims at questioning the witnesses/suspects. Even though the techniques are close, the goal of an interview is to obtain information whereas the purpose of the interrogation is to confront a suspect against the information which was acquired more likely through the interviews. The moods are also different: in an interview the witnesses are more likely cooperative whereas in an interrogation the witnesses are unlikely cooperative since the methods are more confrontational to push the person in high emotional stakes in order to get some leaking cues of deception towards a confession, or not towards the elimination of the innocent.

The difference of settings is also important in the psychological pressure: since the purpose of an interview is to get information, the witnesses are more likely interviewed at their place in their "territory". On the opposite, for an interrogation, the aim is to prevent the witness to take control of the interrogation, hence he's invited to be interviewed in an interrogation room. Removing him from his environment doesn't mean reducing his feeling of safety: the skilled interrogator will ensure that the witness feels safe, which is the foundation of a non-coercive interrogation leading to obtain the truth. The room is setup in a way to remove any physical roadblock like tables or junk in-between the protagonists. The persons are not closed-friends, then having the chairs setup in the corner of a table is on optimal setting. The interrogation room is also equipped with voice and/or video-tape to record the interrogation to protect the interrogators to be accused of coercive methods, and to register the confession (if any) of the suspect. It also helps other professionals to check the tape for further cues. A 2-way mirror also helps the interrogators to observe the witness while he's left alone.

The Follow Up Investigation and Investigative Resources
The Crime Laboratory

1. **What are neighborhoods and vehicle canvasses? Why do we brief investigators before they begin these types of canvasses?**

These canvasses are an attempt to locate witnesses who may have heard, seen, or smelled something of investigation importance around the crime scene. Approximately 20% of all cases got results about information to investigate.

- The neighborhood canvass aims at interviewing door to door the people around the crime scene: other tenants, business owners and their employees, …
- The vehicle canvass makes a record of all vehicles in the area by providing their location, their description, the license plate/VIN and anything unusual shall be noted.

Investigators shall be briefed so that according to the type of offense they can adapt the extent of the canvass. The time of the day and the characteristics of the crime scene also help to figure out when to perform the canvass since the people patronizing the area may not be the same according to the time of the day.

2. **What are sprees, hot spots and crimogens?**

http://highered.mcgraw-hill.com/sites/0072564938/student_view0/glossary.html, or book p. 195.

Sprees: *A crime characteristic in which crimes of the same type are committed at almost the same time by the same offender* like for example vandalizing all cars in a row.

Hot Spots: *A location where various crimes are committed on a regular basis, usually by different offenders.*

Crimogens: Either (i) an individually known offender who is responsible for a large number of crimes; or (ii) one victim who reports a large number of crimes.

3. **Describe the measures of effectiveness of crime laboratories.**

The crime labs measures of effectiveness are:
1. Quality: judged on the technical capabilities of the laboratory and the abilities of the staff members
2. Proximity: judged on the location of the lab according to the law enforcement agencies around
3. Timeliness: judged on the turn-around-time to provide the examination results to the investigator

The NAS (National Academy of Science) issued a report following up their audit in order to strengthen forensic science in the USA. They found many deficiencies and recommended the following actions:
- Enforce rigorous and mandatory certification programs
- Seek for accreditation, documenting the levels of trainings and continuous education
- Foster autonomy and independence of crime labs
- Provide special funding for labs in-need to ensure professionalism and autonomy
- Ensure that court testimony is grounded in science
- May try to align state and federal agency labs to collaborate so that their don't duplicate their efforts

Excerpts of audit results:
"*forensic lab technicians in NYC were caught dry-labbing, or reporting results without actually performing any tests. […] documented corruption and lack of supervision in Houston TX Police Crime Lab, poor trained staff and intentional contamination of evidence […]*"

"*The audit found that technicians had misinterpreted data, were poorly trained, and kept poor records that did not meet specified levels of acceptance within the laboratory. They found that in most cases, they used all* *available evidence, barring defense experts from refuting or verifying their results. They also discovered a leaky roof that had dripped so profusely that dozens of DNA samples of evidence had become contaminated with water"*

Describe the first know murder investigation solved by DNA Evidence
(Hint* It was not in the United States)

https://letraining.dna.gov/dnaoverview: *What Every Law Enforcement Officer Should Know About DNA Evidence* (certificate that I successfully passed), section about *DNA Evidence Overview*; or book p. 13.

DNA was first used to solve a crime that occurred in England in 1986. In 1983 and 1986 in Narborough England, near the village of Enderby, two young girls were raped and murdered. Over the course of the investigation, a 17-year-old local mental hospital employee confessed to committing the 1986 crime. While the two cases were very similar, the suspect would only confess to one. Authorities sought to use DNA testing to link the two crime scenes and thus implicated the suspect in the 1983 rape and murder.

The police were shocked to find that while the two crime scene samples matched each other, they did not match the suspect who confessed. After three and a half months in jail, the original suspect was released. This prompted the authorities to launch a mass screening of over 1400 townspeople. After the real perpetrator attempted to have someone else give "his" DNA sample, Colin Pitchfork was arrested and convicted for the 1983 rape and murder of Lynda Mann and the 1986 rape and murder of Dawn Ashworth.

4. What types of information can be determined from blood splatter and glass fracture patterns?

By studying the bloodstains (aka blood droplets, or blood splatters), the investigator can learn significant facts:

1. Direction in which they were traveling when they hit the surface
2. Distance from the source of the blood and the location of the droplets
3. Angle of impact
4. Direction and speed of the blood trails
5. Nature of the object used as a weapon
6. Number of blows struck
7. Relative locations of the people, surfaces and objects having the droplets on them
8. Sequence of events
9. Interpretation of blood-contact and blood-transfer
10. Estimation of the elapsed time for the event and the volume of bloodshed

The glass fracture patterns may tell

- the direction from which the bullet penetrated the glass (cone-shaped area on the opposite side of the surface of impact)
- the sequence of impacts according to the radial and concentric fractures lines which develop in the same area (the line stops if another line is on its path, hence this shot came after)

Injury and Death Investigation

Unless mentioned otherwise, the answers were found in Criminal Investigation class book. The illustrating pictures come from Google-Images which has a comprehensive collection of disgusting images.

1. Describe an incised wound, stab wound, and laceration. What would cause the difference in wounds?

Incised wounds, or "cutting wounds", are inflicted with a sharp-edged instrument such as a knife or a razor. Cutting wounds are often founds on the arms, face, legs or around the throat. The severity is directly is directly related to the shape and sharpness of the weapon, the part of the body being cut and the amount of force used in striking the victim.

Stab wounds results in severe damage to a vital organ, internal bleeding, shock, or secondary infections that develop several days after the attack. The shape, size and keenness of the blade all determine a wound's shape and depth, as does the manner in which the knife is thrust into and pulled out of the body.

Laceration wounds bleed freely and characteristically are accompanied by bruising around the edges. They are produced by clubs, pipe, pistols or other such blunt objects resulting in open, irregularly shaped wounds.

2. Livor Mortis is important for three reasons. What are they?

Livor Mortis aka lividity or postmortem hypostasis, is a reddish purple coloration in areas of the body due to accumulation of blood by gravity. This is extremely important for three reasons:

1. When considered with other factors, it may help estimate the time of death
2. It may indicate that the body has been moved after death if the location of the lividity disagrees with the position of the body
3. The coloration of the skin may indicate the cause of death, cherry red (not red purple) in case of monoxide poisoning or extreme cold

3. Describe the differences between an entrance and exit gunshot wound. Describe the distances from which the weapon was fired and how the wounds differ.

The **entry opening** is smaller than the diameter of the bullet since the skin is pressed inward, stretched and perforated in the stretched condition before returning to its original position. Immediately around the opening is a contusion ring since the bullet rubs against this part of the skin and crapes the external layer of the epithelial cells. Along with the contusion ring, another black-colored ring (smudge ring) consists wholly of small particles originated from the surface of the bullet.

The **exit wound** may have a ragged appearance with flaps directed outward. The exit wound may be start-shaped, larger than the entrance wound.

Entry and exit opening may be similar according to the circumstances:

- a long distance shot with metal-jacketed bullet
- a close shot produces a star-shaped entrance wound

A **close shot** is defined to be less than 18 inches between the muzzle and the body when the shot was fired, and distant shot when the distance is greater than 18 inches. A contact bullet wound is made when the muzzle of the weapon is pressed against the body when the shot is fired, metallic particle and powder residues are driven into the body and can be found during the autopsy. A considerable amount of incomplete burned powder and impurities from inside of the barrel is also found on the target. The zone of blackening gives valuable information for determining the distance from which a shot was fired. Close shots with black powder show marks of burning up to a distance of 4-6 inches and a distinct deposit of powder smoke up to 10-12 inches.

4. Describe the difference between defense and hesitation wounds. What do each tell an investigator?

Defense wounds are suffered by victims attempting to protect themselves from an assault, often by a knife or a club. They are commonly found on the palms of the hands, the fingers and the forearms.

Hesitation wounds or tentative wounds are shallow cuts self-inflicted by persons considering a suicide attempt or trying out a weapon to ascertain its effectiveness. They are often non-lethal, multiple parallel cuts, short, superficial and often shallow. (*Wikipedia*). They are generally located in the region of the fatal wound, on the wrists, forearms or throat.

5. Describe how Luminol was used in the Blood Evidence video. How does Luminol work? How was the victim murdered?

Luminol is a water-based spray which locates trace amounts of blood within 30 seconds, creating a blue glow after the lights are turned out. The glow is short-lasting, it doesn't differentiate between human and animal blood and it reacts to copper, some alloys and certain bleaches.

In the Blood Evidence video, Luminol revealed no blood in the garage contradicting Darlie Routier testimony, but a lot in the kitchen, especially in front of the sink with attempts to clean it. It was used to reveal the true presence or the absence of blood, and in the case of visual absence of blood, if it was wiped out. These evidence helped contradicting narration of the events.

The victims, Damon and Devon, were murdered by being stabbed multiple times by Routier with a large kitchen knife while they were sleeping on the floor in the main room. A victim was not dead and crawled to the other extremity of the room and was stabbed again twice, to death. The first victim was found barely alive but deceased in the EMT ambulance. She was prosecuted and sentenced to death for the murder of Damon, only, since no DNA of Devon was discovered on the weapon found on the crime scene hence offering to the jury strong reasonable doubt.

Sex Related Offenses
Crimes against Children

1. What are some of the reasons that women do not report rape?

Women are reluctant to report rape to their local police because of the treatment they may receive from the criminal justice system *(p276)*:

- Lack of belief in the ability of the police to apprehend the suspect
- Worries about unsympathetic treatment from the police and discomforting procedures
- Belief that they were somehow at fault for the rape
- Embarrassment about publicity, however limited
- Fear of reprisal by the perpetrator
- Apprehension, as a result of TV programs or newspaper reports, of being further victimized by court proceedings

1. Explain the Dennis Jurgens' case. Why wasn't the incident investigated at the time of Dennis's death?

Lois Jurgens adopted Robert and Dennis. Dennis passed away from peritonitis in 1965 when he was 3 years and a half old. Dennis biological mother, Jerry Sherwood, was informed of the death of her son when she looked for him in 1980. She wanted to tell him good bye when she found some evidence in his mortuary file which led her, by curiosity, to suspect a non-natural death. Finally, she convinced a medical examiner to check the case which led to the exhumation of the body and an in-depth autopsy. It appeared that Dennis was severely abused, covered of bruises, with bite marks on his genitals and severe damaged bowels caused by external energy. Twenty years after Dennis' death, the foster mother was tried and convicted of child abuse thanks to the testimony of Robert who was five years old at that time. She was sentenced to 25 years and paroled 8 years later (http://murderpedia.org/female.J/j/jurgens-lois.htm).

The incident was not investigated in 1965 because the cause of death was diagnosed to be a peritonitis. The bruises were explained as being caused by a fall. Hence no special condition was brought to investigate further, which led to a diagnostic of natural death.

In my opinion, 1965 was another time in which the techniques of autopsies were not as well established as they were 20 years later. At that time I guess that peritonitis were common and kids with bruises playing outside was also common (the PlayStation, TV and McDonald's didn't exist).

Further questions:

1. Since the corpse was mummified, were the bite marks processed in an attempt to match Lois' dentition?
2. Was the testimony of Robert who was 5 years old at the time of the event, 20 years earlier, legitimate?
3. The child's bowels damage was definitively provoked by an external force, what is the connection with the mother? (what about the father, a nasty bike injury, …?)

2. Research (online) the Roman Polanski case and its current status. Do you agree with Swiss government's refusal to extradite him? Explain your answer.

http://en.wikipedia.org/wiki/Roman_Polanski_sexual_abuse_case

Polanski was charged in 1977 by a grand jury in Los Angeles with rape by use of drugs, perversion, sodomy, lewd and lascivious act upon a child under fourteen, and furnishing a controlled substance to a minor. Geimer, the victim was 13 years old, 30 years younger than Polanski. Polanski pleaded guilty to the charge of unlawful sexual intercourse with a minor in a plea bargain obtained by Geimer's lawyer.
The court ordered Polanski to report to Chino State Prison for a 90-day psychiatric evaluation, what he did after a working trip to Europe. He was released after 42 days. Polanski was expected to get probation only at the demand of all involved parties, including the victim. Ultimately, he understood that the judge will not follow the

recommendation and would send him to jail and deportation, then before being sentenced, he flew back to Europe. The sentence still remains pending as of today.

A financial agreement was signed between Geimer and Polanski in 1993.

In 2008, the prosecutor David Wells confessed that he lied and coached the judge to have him sentencing Polanski despite the plea bargain. Was it for political reasons that he wanted to look good in this case? A case dismissal was consequently filled in, and rejected in 2009. Geimer reinforced her willingness to have the case dismissed, in vain.

Since his escape from Los Angeles, he resided in counties which could not extradite him to the USA despite the 1978 US arrest warrant and an Interpol red notice from 2005. In 2009, he flew to Switzerland to attend the Zurich Film Festival. He was arrested at the airport and put in provisional detention. In July 2010, the Swiss Supreme Court rejected the US request for extradition and released Polanski.

According to the Swiss authorities, the extradition was rejected because the US officials failed to produce some documents, especially a "*confidential testimony from a January 2010 hearing on Mr. Polanski's original sentencing agreement.*" This document was supposed to clarify whether or not the 42-day court order for psychiatric evaluation was Polanski whole sentence according to the Judge (now deceased). If Polanski had served the sentence, then the US extradition request would consequently have no foundation.

In my personal opinion, all this story sounds phony: a mother leaving alone her young teenager to be photographed, a victim who refuses to get her assaulter prosecuted but accepted money, a general attorney who lied, the judge who frivolously left a pedophile free to leave the country, and ultimately the US extradition request which is incomplete despite about 1 year of procedure. This year of procedure should have led to have access to the requested document which appeared to be a central piece in the Swiss authority decision. Why was this document not provided? I guess the Swiss court had the same question which was left unsatisfied hence leading them to the fair conclusion they reached in regard of the document they had in their possession.

3. What is the mechanism of injuries of Shaken Baby Syndrome? What is Munchausen's Syndrome by Proxy (MSBP)

Shaken Baby Syndrome (SBS) *(p308-310)*: the mechanism of injury consists in holding the infant by the chest and violently shaking him back and forth. The shaking causes the infant's head to whip forward and backward from the chest to the back. The infant's chest is compressed, and the arms and legs move about with a whiplash action. At the completion of the assault, the infant may be limp and either not breathing or breathing shallowly. During the assault, the infant's head may strike a solid object. After the shaking, the infant may be dropped, thrown or slammed onto a solid surface explaining skull fracture in many cases. Note that shaking an infant may cause by itself serious intracranial injury or death.

Munchausen's Syndrome by Proxy (MSbP) *(p311)*: a parent or child caretaker attempts to elicit medical attention for him/herself by injuring or inducing illness in a child. The parent may then try to resuscitate the child or to have paramedics or hospital personnel save the child. It's unfortunately not always possible.

4. Explain the Marybeth Tinning case. How many victims were there? How was the case finally solved? Search the internet and locate where she is now?

The video presented Marybeth Tinning family story, she had eight natural children and one adopted child, all of them died in their infancy from natural causes of death including cardiac arrest, SIDS (sudden infant death syndrome) or infections. The physicians believed in a fatal heredity pathology. This assumption was abandoned when their adopted child also passed away. The suspicion intensified when a physician found suspect that many children turned blue as if their airways were obstructed. Ultimately, the death of the last baby, Tami Lynne, was this time diagnosed as homicidal asphyxia. Marybeth was interrogated and she confessed the assassination. She was convicted for the murder of Tami Lynne only. She was diagnosed with MSbP (Munchausen Syndrome by Proxy).

Even though nine children passed away in their infancy, there's only one victim since Marybeth was sentenced for 20+ years of reclusion for only Tami Lynne.

The case was finally solved by the reunion of four human traits:

- The curiosity of the last physician who found strange that nine children passed away
- The professional network of this last physician who knew a medico-legal physician
- The tenacity of this medico-legal physician who scrupulously analyzed all death cases
- Tinning who could not refrain to murder her adopted child in her psychosis

Further questions that were not answered:

1. Why the death of the adopted child didn't immediately triggered the attention of the hospital since their theory about the death gene has just fallen apart?
2. After the second death, why the bodies have not been systematically autopsied? There seems nine corpses were needed to start doing something.
3. If the infants were suffocated, some petechiae should have been present in the white of the eyes. Such findings trigger an autopsy for the adults the find out the cause of the death, why not for the children?
4. How many so called SIDSs are in fact MSbPs?
5. Are there any financial liabilities that the Health Care Insurance Companies or the hospital had preferred avoiding by being so frivolous with 8 dead children?

Tinning is inmate No. 87G0597, housed at the Bedford Hills Prison for Women in New York (http://murderpedia.org/female.T/t/tinning-marybeth.htm). All her paroles have been denied, her next opportunity for parole is in January 2015.

Human Trafficking
Robbery

1. Answer the following questions from the Scene of the Crime video.

(a) What city was it filmed in and what unit did it document?

The video was filmed in Baltimore, Maryland.
The unit which was filmed was the Baltimore City Mobile Crime Scene Unit. They are 24 civilians (not police officers, not even carrying a gun for their protection) collecting evidence and photographing the scenes of crime.

(b) Who is "Z"?

"Z" is the nickname for Ziad Kallad, the youngest member of the team who has just finished his training. He grew up in Beyrouth, Lebanon, during the Civil War.

(c) What was Susan's motivation to become a member of the unit?

Susan had personal motivations to join the crime scene unit. When she was 6 years old, her uncle was murdered in a failed robbery, which might have been a trigger for her to be interested in the law enforcement and justice. Later in her teens, her parents brought her to tour a FBI building, she was attracted by the crime lab. Finally, her taste for the photography may have also be a reason to transform the passion into a job.

(d) What was Stephanie doing when she was dispatched to an Arson investigation?

Before being called for an Arson investigation, Stephanie was showing gross pictures from her collection that she has collected over years. The show & tell was interrupted by the call from the dispatch.

(e) Describe at least 3 crime scenes from the video and who investigated them.

"Z" was called on a murder scene. A black man was shot to death in the street, lying on the pavement near a truck. I didn't understand whether it was his car or the reason for the shooting. Z scrupulously photographed the scene, collected 3 cases and dusted the car to find fingerprints, in vain. Z's mentor and supervisor, Ted, joined the scene to help Z drawing the sketch of the scene. Z was not happy to be paternalized. Once the body was collected, the firemen cleaned the scene.

Jawad Abdullah was called for an indoor teenager suicide. Jawad took picture of the lying corpse. I didn't figure out in which part of the house the incident occurred. I also don't' know by which mean the person killed him- or herself.

Susan was called for a broken apartment. A woman was seen leaving the flat. She entered the apartment and searched for latent fingerprints. She found some on the broken window. If these fingerprints belong to the woman that the witnesses saw, then it will be a solid and irrefutable evidence against her. Later on, Susan was called for a quadruple shooting, there seems that 3 victims were dead and one sent to the hospital. Susan collected blood samples.

Z was called for a drowning near a boat in the night. We clearly noticed white foam near his nostrils assessing that the drowning was the (probable) cause of death. Z took pictures and scrutinized the body. He noticed that some crabs might have bitten the body. He also wandered about the scene and noticed a Swiss Army knife with the blade open on the floor.

2. Give three explanations for the increase in carjackings.

With the number of car robberies increasing, the term of carjacking was used in 1990 in Detroit. This category of incident may have as root causes:

1. The consequence of the success of anti-theft device market: tracking devices, chips in ignition keys, motion sensors, ...

2. The widespread supply of potential victims: no skill is required, no inside information is needed, minimal planning
3. The transportation to flee the crime scene after robbing the driver to get to or from another crime

3. What are the differences between forced labor, involuntary servitude, peonage, and debt bondage. Give an example of each.

Forced labor: persons are forced to work against their will through actual or implied threats of serious harm, physical restraint or abuse of the law. Mexicans workers are smuggled into the USA to work in a field, threatened to be reported to USCIS if they leave.

Involuntary servitude: persons are forced to work through physical force or threats of physical force. An Indian young lady is smuggled in the USA sponsored by her uncle through a student visa. She's threatened to be reported to the USCIS if she doesn't comply doing janitorial tasks.

Peonage: persons are compelled by force, threat of force, or abuse of the law to work against their will in order to pay off a debt. Chinese lady is smuggled in the USA and forced to work in a sweatshop until her debt is paid off.

Debt bondage: persons' work is never reasonably applied toward payment of a debt. The same Chinese lady is working for $5 a day until the $10,000 debt is paid off.

4. What are the major elements of the U-visa and the T-visa, and what are their benefits for human-trafficking victims?

The U-visa, created in 2000 as part of part of the Victims of Trafficking and Violence Protection Act, is available to immigrants who are victims of a wide range of serious crimes like mental or physical abuses, if they are in possession of valuable information, or a source of help for the prosecution. The victims must demonstrate their willingness to cooperate in the investigations and the prosecutions of the human traffickers.
The T-visa is available for victims of severe forms of trafficking who self-petitioned to stay in the USA, without any guarantee of approval.

These visa provide a status to the victims, hence encouraging them to report criminal activities in order to prosecute the perpetrators.

5. What are the two types of robberies? Give an example of each.

There seems that the term "types of robberies" can be interpreted in different ways. In the section "Typology of Robberies", I may have found to general types: mugging and HIRs.

> **Visible Street Robberies** (aka **mugging**) usually involve little or no planning by the perpetrator/s who waits for his prey like a lady loosely holding her purse, a mother withdrawing money at an ATM, or a cabdriver in an isolated area. Carjacking seems to be a category of Street Robberies when they occur in the public space. The perpetrators are more likely to use strong-armed robbery method, which means that no weapon is used.
>
> **Home-Invasion Robberies** (aka **HIRs**) target specific person identified by the perpetrators in shopping centers or similar location. They follow the victim to their homes and invade their properties using deceitful methods to enter the premises. A wealthy couple in a pricey car is followed from the local supermarket to their home, the robber pretends to be a florist delivering a bouquet, he enters the premises, beats the victims, steals their valuable belongings and flees the scene stealing the expensive car.

In the “Overview: section, there seems that 2 types of robberies can be exhibited in terms of weapon usage.

> **Strong-Armed Robberies** means that no weapon is used, the perpetrator may beat the victim or use threat to force the victim to comply. In a personal case, I was attacked in Marseille, France, by 2 youngster pickpockets who managed to keep me busy while talking to one while the other stole my wallet in my pocket.
>
> **Armed Robberies** means that the offender used a weapon (gun, knife, … or even a needle that he claims to be contaminated with HIV). In a personal case, I was attacked in Marseille, France by a Muslim who threatened to stab me because I looked Jewish to him. I managed to convince him that I was not otherwise he would have robbed my life.

Burglary

1. Can a suspect be charged with burglary even if they don't take anything? If so, please explain.

According to the definition of a burglary in [question 2], the intent to commit a felony and its associated level of severity determines the level of severity of the breaking-and-entering.

If a person breaks and enters the premises to vandalize them, without taking anything, in my opinion the intention is to act against the building which fits the definition.

If a person breaks and enters the premises to commit an arson, without taking anything, in my opinion the intention is to act against the building which fits the definition.

2. What are the elements of the crime of burglary?

The crime of burglary consists of breaking and entering a building belonging to another with the intent to commit a crime herein. A burglary is an offense against the habitation, dwelling or building itself.

- **Breaking** into, our of or within, using a slightest force to remove something material that lakes up a part of the building and is relied on to prevent intrusion (like a locker or a dead bold)
- **Entering** once the breaking occurred
- **Building** is a place of residence, an office, or a hotel room
- **Belonging to another** without having a lawful access
- **Intent** to commit a felony and the severity of the felony determines the level of severity of the breaking-and-entering

3. What considerations are important in approaching the scene of a burglary?

While approaching the scene of the burglary, the responding unit shall avoid any superfluous noise like the siren or the squealing tires which can give a signal to the burglar and valuable time for him to flee the scene. The key factor is time: a delicate balance between being quick, discreet and vigilant.

They should also observe unusual behaviors since burglars with hide in plain sight, like

- any vehicle driven away from the scene and especially high end brands
- any pedestrian calmly walking away from the scene (action stereotyping)
- lovers in a car

When dispatched to a burglary-in-progress call, the uniformed officer working alone should attempt to coordinate his or her arrival time and position with the backup unit.

If a burglary has been committed and the police department has a canine unit, the uniformed officer at the scene should request its presence prior to entering the building.

4. What room do most residential burglars go to first? Why?

According to a former active burglar (more active than former), residential burglars go to the master bedroom for jewelry and cash because they assume that the owners keep their money there. They search all dresser drawers, in the shoe boxes, under the mattress and behind the towels in the linen closet to name a few. The master bathroom is also searched for drugs. The kitchen may also be searched and especially the freezer compartment. The garage and storage sheds are often the location for larger property stolen.

Bottom line is if we believe any place is a "clever" place, more likely other people believe so, including the most experimented burglars.
Ultimately, any place can be found, the purpose is hence not to find the most secure place, but rather to find a place to slow down the burglar. There seems that burglars often give up quickly to flee the scene the quickest as possible.

5. What measures can homeowners and business operators take to lessen their chances of being burglarized?

According to a former active burglar, (almost) reconverted in homeowner counselor, a few tricks may help to discourage burglars:

- Having the sides of the house lit with motion-sensor lights, especially the front and the back, making sure the light bulb cannot be easily unscrewed
- Installing dead-bolt locks
- Avoiding placing valuables where they can be seen
- A dog also helps dissuading, any kind of dog, as long as it barks. Even a "beware of dog" sign without any dog may help
- When the residents are away, asking a neighbor to kindly remove the mail from the mailbox
- Having a residential alarm system, with visible signs
- Hiding the valuable belongings in a place difficult to discover, especially not in the master bedroom
- For those having a safe, making sure it's bolted in the floor or in the wall
- Properly locking the doors and the windows
- Preferring a money chest rather than a fire resistant safe
- Use timer for household lights and radio
- Ask a trusted neighbor to report suspicious activity to the police
- In the summer, when the windows are left opened, put a wolf trap on the floor beside the window (not advised with children at home)
- Approaching the police department who may have an expert in residential home burglary prevention
- Approaching any unfamiliar person from the neighborhood for a petty chat, the burglar would be scared to be recognized later if a burglary would occur in the vicinities
- Removing ladders or any object from around the house that the burglar could use to break-and-enter the premises
- Cut plants low around the house to prevent the burglars to conceal and grow thorny plants where someone might attempt to force an entry
- Many other common sense tricks like not letting a note on the door like "I'm at the supermarket, back around 4pm", or leaving the keys under the rug or in a flower pot...

Larceny/Theft and White-Collar Crime
Vehicle Thefts and Related Offenses

1. After identify theft is committed, follow-on crimes occur. Identify five types of follow-on crimes.

1. Accessing and draining the victim's assets: credit cards, investments and bank accounts
2. Opening accounts for oneself in the name of the victim: utility, phone, credit cards, bank
3. Contracting a loan or mortgage for oneself in the name of the victim
4. Obtaining benefits from 3rd parties: from the government, health-care and Medicare services
5. Seeking for employment for oneself in the name of the victim: legal status, compensation
6. Committing crimes attributed to the victim: visa, passport, check fraud, insurance fraud, scams

2. List eight ways identity thieves can get a victim's personal information.

Identity thieves can access victim's personal information in a few ways, sorted from the least to the most predominant method to access the information (*2005, Javelin Strategy & Research, book p.411*).

1. Phishing: e-mails sent appearing to be from legitimate businesses or businesses known from the victim
2. Computer viruses/hackers
3. On-line transactions
4. Taken from the garbage
5. Computer spyware
6. Stolen papers, fraudulent change of address
7. Offline transaction
8. Corrupt employee who has access to the information
9. Friends, acquaintances, relatives with access to the information
10. Lost, stolen wallet, checkbook or credit cards

The "big three" [8, 9, 10] represent more than 50% of the cases, whereas [1, 2, 3, 4] are relatively low, possibly with the tools which have been created to fight such security breaches as presented in the table below. [5] is surprisingly increasing whereas dedicated computer protection also exist in this domain.

Some companies like *LifeLock* propose services to monitor unusual activities on personal intangible property like credit card numbers, driving license, bank accounts numbers, addresses, IDSS, etc… Having so much personal information stored in one place sound scary though especially when we know that many breaches come from corrupted employees. The credit card companies also have very thorough follow-on mechanisms to detect unusual activities.

In France I've never heard about anybody around me who had had unauthorized transactions on their credit card transcripts. In the USA, in the last 5 years, I had 3+ unauthorized transactions (reimbursed by the credit card company after they detected the anomalies), and my credit cards replaced 5 times.

Access to information	**Method to prevent the breach**
Phishing, malware	Anti-phishing feature in computer anti-viruses, built-in in *FireFox* web-browser
Computer viruses/hackers	computer anti-viruses. Affordable *Norton*, or free *Avast*. *Kaspersky*, *Avira*, *McAfee*.
On-line transactions	Credit cards providers propose a service for on-line credit card usage: a new number is created for each on-line transaction with a ceiling amount. *BankOfAmerica* propose *ShopSafe* for free.
Taken from the garbage	Affordable document shredder. *LifeLock* gives one

	for free to their new members
Computer Spyware	Computer anti-viruses like *Avast* have the anti-spyware feature. *Ad-Aware* was surfing on the anti-spyware wave.

3. Why is it difficult to know how honest Internet gambling sites are?

All forms of gambling via Internet are illegal since the Unlawful Internet Gambling Enforcement Act from 2006 passed by the Congress. This means that any gambling sites accessible from the USA are illegal tainted from their existence itself their honesty. On the US territory, we should not even wonder whether or not the site is honest: it's illegal.

Such sites may be underground but are mainly off-shore hosted in foreign countries making enforcement very difficult.

4. Describe some of the principle investigative steps in determining whether a vehicle fire is accidental or arson.

In accidental fires, the origin of the fire is normally the part which is the most damaged. The fire spread in diminishing degrees from the point of origin according to the prevailing conditions. When there are variations in these conditions, an arson is possible.

- What is the origin of the fire?
- What are the conditions? (wind direction & velocity, materials for flames feeding, …)

In arsons, started with flammable material, intense heat is found in many places.

- What are the origins of the fire?
- What is the fire path?

The **inspection of the salvage** may lead to the discovery of matches, sole or tire prints, or any other interesting piece of evidence which could matter for the case.

The **inspection of the Fuel System** may indicate if the gas was used as flammable material: checking the cap, breaks between the tank and the fuel pump, drain in the bottom of the car.

The **inspection of the Electrical System** may tell whether the source of ignition was a short circuit. In modern vehicles short circuits are not likely to happen.

The **inspection of the Motor, Radiator and Parts under the Hood** may also indicate if the fire was accidental since the chances of accidental fires to start are around the fuel pump, the carburetor and at the wiring. All other locations may be considered suspect.

The **inspection of the Body** doesn't provide that much information if badly burned. The marks on the vehicle may provide signs of intensity of the fire. The blisters in the paint may also provide valuable clues like the position of the hood or the direction of the wind.

5. How did Bernie Madoff manage to steal millions of dollars for so many years without being caught? What was his crime?

Madoff managed to steal billions of dollars over his 45-year career running a Ponzi scheme. He used a few tools showing that he knows very well human nature and how to manipulate people.

Greed: intermediaries like Bienes & Avienno, and customers got easy money without doing that much, they just got the easy money.

Charisma: The SEC didn't pay attention of Madoff because of his status of well respected broker
Family and Relatives: his underground business was run by under-qualified "friends" who never asked questions; his accountant was a 2-person office

Intimidation: "he owned us" alleged Bienes. No question policy and intimidations if customers were willing to know more about how their money was invested. Underqualified people assumption that they'd not understand the explanations and the esoteric jargon of Madoff about how he could do so much money

Bribery: Flow of letters to the SEC about concerns that Madoff was running a Ponzi Scheme, without any effect. Madoff cleared after 2 years of investigations.

Pride: people dealing with Madoff were proud to be in his close circle of "Madoff Secrecy Rule"

Reputation: Madoff is a well-known broker in the business for 45 years, then the assumption is made that he's doing things properly. This was the major line of defense that Madoff & Al. have been taking while questioned. For those trying to investigate Madoff showed the (phony) documents and never dug in deeper to check the allegations.

All of these themes are the consequence of the **cult of the silence**. People knew like the IT department or some hedge found founder (like S. Manzke whom eye micro-expressions didn't agree with what she said). The remedy should be **challenging the status-quo** and **willing to understand**.

Bernard "Bernie" Madoff was arrested in 2008 on charges of **securities fraud** and pled guilty to a federal indictment carrying out one of the largest **Ponzi Schemes**, defrauding his clients out of an estimated $64 billions.

Securities fraud *is any manipulation or deception that affects the purchase or sale of security and usually includes the misinterpretation or omission of significant information. A security is generally an investment instrument like stocks or bonds from which an investor expects to derive financial benefit through the efforts of others.*
A **Ponzi Scheme** *is an security fraud for which the investment scheme appears to work in the beginning as investors receive monetary return-on-investment, not based on profits from a working corporation of stock fund, but rather on new investors entering the program.*

I run an personal on-line assessment (http://3bc.bertrand-blanc.com/Agile/sob.html) based on the *Robert Hare's Psychopathy Checklist-Revised (PCL-R)* that I use to identify *Seductive Operational Bullies* (aka *psychopath lite* or *assholes*) in the workplace. I filled in the questionnaire based on the 1-hour reportage. It seems to me that Madoff is a psychopath…

Report generated for Madoff on Saturday, November 02, 2013 7:19:55 PM

criterion	percentile	verdict
Seductive Operational Bully - SOB	77%	very high - professional evaluation recommended
Interpersonal	100%	very high - professional evaluation recommended
Affective	75%	high - professional evaluation recommended
Impulsive Lifestyle	83%	very high - professional evaluation recommended
Diverse, Externalizing Antisocial Tendencies	0%	very low - normal population

Cyber Crime
Agricultural, Wildlife, and Environmental Crimes

1. Define the activity of hacking or cracking.

Hacking or **cracking** is *the process of gaining unauthorized entry into a computer system*. The perpetrators are classified into two categories

- Black hatters: hackers/crackers who use their skills to illegally make money
- White hatters: hackers/crackers who use their skills for good like by identifying security risks in computer systems and notifying corporations of their vulnerabilities

2. What is attack malware? Discuss the concept of attack malware in terms of logic-bomb traps and Trojan horse programs.

A malware is a **mal**icious soft**ware** designed for computer intrusion. Their purposes are:

- to deny use of computers
- to overtly gain control over computers
- to secretly access or intercept computer data
- to subvert the operation of computers for personal profit

Malware attacks can be categorized into a few categories: botnets, viruses, logic bombs, ransomware, dead drop, Trojan horse, spyware, rootkits and scareware.

For example:

- A logic-bomb is "detonated" when a specific event occurs like all data are erased when an electronic notation is done when a person is fired
- A Trojan Horse is downloaded through an e-mail of a web-site when a user frivolously clicks a link invited to do so through deceptive invites. When the spyware is in the system, it can help to download other software, steal personal information or allows remote access.

3. What is digital forensics? What are some of the primary steps in conducting this process on a computer?

Digital forensics is *the process of acquiring, preserving, analyzing, and presenting evidentiary electronic data relevant to an investigation or prosecution.*

The primary steps are:

- Securing and evaluating the scene
    - remove and exclude all persons from the area
    - direct non-investigative persons to stay in a separate room
    - do not touch or move any electronics devices except gently moving the mouse to see what is on the screen
    - determine the power state of the devices
    - immediately disconnect the power is the files are being deleted or of the computer is remotely operated
    - do not disconnect the devices if destruction of evidence is not a concern
    - remove the power cord from the back of the computer
    - do not attempt to examine the content of the computer
- preliminary interviews to determine
    - who are the owners of the devices
    - who are the users of the devices

  - what are the passwords
  - what are the accounts and their password
  - what are the access restrictions and destructive devices
  - where are the wireless equipment located
  - who is the internet service provider
  - who pays the internet bill
  - how is the internet access
- Documenting the scene
  - Report, photography and video of the scene
  - Record the activities visible on the screen
  - Note all connected devices to the computer
  - Note the condition of the power status
  - Document all wires connected to the computer
  - Tag every cable
  - Document the location of the wires
  - Document the location of other devices
- Collecting and transporting evidence
  - Remove batteries from laptops
  - Place digital evidence in antistatic packaging
  - Place each device in separate container
  - Carefully pack all evidence
  - Keep digital evidence away from magnetic fields
  - Maintain the chain of custody

4. What generalizations can be made about livestock and tack theft?

Five generalizations can be made about livestock and tack theft, probably based on statistics:
1. Most livestock thefts are committed by persons who have been or are currently employed in some aspects of the livestock business
2. It is common for livestock to be stolen, transported and disposed of before the theft is discovered. For horses the theft may be discovered in a day to two weeks, whereas for range cattle it may take months
3. Livestock is generally stolen to be sold for economic gain
4. The theft of horses may create emotional situation because to their owners
5. Horse thieves also tend to be tack thieves

Note that "freezer crimes" is an exception, the motive is not the gain but the food during economic hard times. The perpetrators are usually from the adjacent urban area.

5. What are the two major categories of poachers and how do they differ?

Poachers can be categorized into two types:
1. **Situational poachers**: motivated by opportunities or circumstances, the poacher opportunistically shoots an animal. It might also be for economic reasons to feed the family, or for the thrill of it.

2. **Professional poachers**: motivated by profit, they kill for the "business" like trophies, hunting out of season on private lands for a fee, using illegal hunting methods like using aircraft.

Arson and Explosives

1. Research the Boston Marathon Bombing and provide the following information.

Most information comes from Wikipedia. The focus is here on the first bomb only, even though two bombs were detonated with a 13 seconds delay.

What are the names and backgrounds of the two suspects?
The suspects were identified by authorities after killing a police officer and hijacking a civilian, thanks to DMV records. The family Tsarnaev immigrated as refugees around 2002 from Chechnya, and settled in Cambridge, MA.

Tamarlan Tsarnaev (10/21/1986-04/19/2013), 26 years old went in community college and dropped out to join the US Boxing Olympic team. He got married to an American lady who was pregnant. He has an history of violence, probably also including a triple homicide (09/11/2011). Tamarlan became a radical Muslim and was under scrutiny from the Russian Security Services and the FBI, in vain.

Dzhokhar Tsarnaev (07/22/1993), 19 years old was a student at the University of Massachusetts Dartmouth with a major in marine biology. He became US citizen on September 11th, 2012. Dzhokhar admired his old brother.

Their mother, Zubeidat, may be a radical Muslim extremist supporting the jihad. Tamarlan and Dzhokhar grew up and were influenced by radical Muslim doctrine at home, at the radical Mosque they were patronizing as devout Muslims, in Chechnya or Dagestan, and probably also from the rejection they faced in their daily life from the US: Tamarlan stated he had no American friends and didn't understand them.

How was the bomb constructed according to the FBI?
The bomb was an improvised explosive device (IED) made with a pressure cooker stuffed with shrapnel (bits of metal, nails and bearing balls). Some powder from fireworks might have also been used. The explosion was triggered by long-ranges remote controls found in toy cars. The bomb was concealed in a nylon backpack.

The instructions were found on a web-site from Al Qaeda in the Arabian Peninsula.

How many people were injured in the blast? How many fatalities?
The bomb exploded at 2:49EDT near the finish line on Boylston Street, killing 3 spectators and injuring 264 persons. At least 14 people required amputations, with some suffering traumatic amputations as a direct consequence of the blast.

2. What are some of the more common causes for accidental or natural fires?

Some of the more common accidental or natural causes of fire fall into 7 categories:

1. **The electric system**: improper wiring or fuses, overloaded circuits, defective switches
2. **Electrical appliances and equipment**: defective devices, short circuits, overheated irons
3. **Gas**: leaks, defective stoves or heaters
4. **Heating units**: overheated stoves or steam pipes, clothes being dried too close to flames, explosion from kerosene stoves
5. **Sunlight**: concentration of sun rays on glasses, windowpanes, convex mirrors
6. **Matches**: children playing with matches in closets or utility rooms
7. **Smoking**: careless disposal of cigarette ashes or lighted devices into trash cans, one falling asleep while smoking

3. What type of burn indication can be examined by the arson investigator to assist in determining whether a fire is accidental or incendiary in nature?

The arson investigator may examine 6 categories of burn indicator to determine the nature of the fire. A burn indicator is the effect of the heat or partial burning that indicates the fire's rate development, point/s of origin, temperature, duration, presence of accelerant.

1. **Alligatoring**: charring and cracking that gives the wood the appearance of alligator skin. These types of blister may be found in many different types of fire
2. **Depth of char**: analysis of the depth of the char helps in evaluating the fire spread, the rate and the duration of the heating
3. **Breaking of glass**: the nature of the cracks (crazing) helps in determining the heating and the proximity of the flames
4. **Collapsed furniture springs**: they may provide various clues concerning the direction, duration and intensity of the fire
5. **Distorted light bulbs**: helps in determining the direction of head impingement
6. **Temperature determination**: materials have a melting point helping evaluating the intensity and the duration of the melting. Melted objects may subsidiary protect some valuable piece of evidence.

4. What are some of the most commonly used ignition and timing devices employed in the commission of arsons?

Common **ignition devices** and **timing devices** are:

- matches
- gasoline & other accelerants like kerosene, acetone
- chemicals like water & phosphorus
- shredded paper
- gas from the stove
- electrical system like doorbell or telephone
- mechanical devices like an alarm clock

5. What is the first duty of the investigator at the scene of an explosion?

The first duty of the investigator is to **secure the scene of the explosion**. The first responders should establish and maintain physical control of the structure and surrounding areas, preventing any unauthorized persons to touch any blast debris which are source of information for expert investigators.

Recognition, Control, and Investigation of Drug Abuse
Terrorism

1. Identify and describe several opium-derived drugs.

Several drugs are derived from opium poppy. They belong to the family of the opiates.

Opium: first drug of abuse, known by many eastern civilizations from 1500bce. It may be smoked making the user appear sleepy and relaxed. Prolonged use creates both physical and psychological dependence.

Morphine: Sertner isolated the substance in 1804. The drug was used in medicine in 1825 as a painkiller and remains the most effective pain reliever. With the invention of the syringe in 1843, it was extensively used on the battle field for the wounded soldiers during the American Civil War. The drug is generally administered by injection. It creates both physical and psychological dependence to the user who feels euphoric and seems sleepy or relaxed.

Heroin: developed in 1874 in England, Bayer started commercializing it in Germany in 1898. It is 5 times stronger than morphine and shall also be injected. Deaths from overdose or allergies are not uncommon dues to the lack of regulation. This substance is also linked to STDs and criminality like clandestine laboratories, smuggling, human trafficking, international criminality, terrorism.

Codeine: identified in 1832. It was primarily intended to relieve moderate pain and coughs, administered orally in tabs, liquid or by injection. However, its primary usage was turned into an underground market: in combination with an antihistamine, the result of the cocktail is euphoria with slow movements and motor skill impairment

Laudanum: discovered in 1660 in England, it was used in the 19th century as an analgesic, cough suppressant, soporific, meningitis, cardiac disease, …

2. From the Hooked1 video.

(a) What is the world's most popular illegal drug

Marijuana, or marihuana, seems to be the most popular illegal drug in the world. It is also called weed, ganja, pot, cannabis, hashish, hemp.

(b) What year was the first federal law governing the use of marijuana

The first federal law governing the use of marijuana was enacted in 1937 under the Marihuana Tax Act, drafted by Harry Aslinger and voted by the 75th Congress.

(c) What is the only area in the world where the marijuana plant does not grow naturally?

Marijuana doesn't seem to grow in the Arctic Circle.

(d) Who brought marijuana to the European continent? When and for what purpose?

Arab traitors brought hashish from the Ganji Valleys from the East to North Africa, then to Spain, at the time of the conquistadors (15th century).

Later in 1804, Napoleon Bonaparte troops brought back to France from Egypt this substance as a spoil of war.

3. Identify and distinguish among stimulants, depressants, and hallucinogens.

Stimulants: these drugs directly stimulate the central nervous system, producing excitation, alertness, wakefulness, and sometimes rise in blood pressure and respiration rate. The major abused stimulants are cocaine, amphetamines, crystallized methamphetamine, phenmetrazine, methylphenidate, cocain. Overdose effects are agitation, increase of temperature, hallucinations, convulsion and possible death. Apathy, long periods of sleep, irritability, depression and disorientation are major withdrawal symptoms.

Depressants: these drugs directly stimulate the central nervous system and are prescribed in low doses to reduce both restlessness and emotional tension, inducing sleep. The major abused depressants are barbiturates, glutethimide, methaqualone, meprobamate, rohypnol, heroin. Overdose effects are unconsciousness and death.

Hallucinogens: these drugs, natural or synthetic, distort the perception of objective reality causing in large doses hallucinations. No medical benefits have been proven. The most abused hallucinogens are PCP (phencyclidine), LSD 25 (Lysergic Acid Diethylamide), ecstasy/MDMA (Methylnedioxy Methamphetamine), mescaline, psilocybin, psilocin, foxy, Ketamine. The side effects are modified by the mood, mental attitude and environment of the user: the unpredictability of the effects is the greatest danger for the users.

4. From the Hooked2 video

(a) How was morphine introduced into general use in the United States?

There seems morphine was introduced to treat alcoholism in the general population, as well as used as surgical anesthetic during the American Civil War in 1840.

(b) What could you obtain through the Sears catalog to support an addiction?

In the 20th century, it was possible to order Morphine and Heroin from catalog and get them delivered by mail.

Today, these drugs are on the Controlled Substances Act, Schedule I and cannot obviously be ordered on Sears catalog anymore. However, the drug addict can still order on-line hypodermic syringes ($19.42, box of 100) and needles. Insulin syringes with needles are also proposed for $30, box of 100. I hope that the flavor injector for Thanksgiving turkey is not used by drug addicts!

(c) Describe the Opium war, when and why was if fought?

From 1839 to 1860, the Opium Wars occurred between the Chinese Qing Dynasty and the British Empire. The Chinese rulers wanted to ban opium due to the disasters it caused on their people. The British Empire wanted to defend their supplying channels. China lost due to the advanced technologies the British Army was using. In 1842 China signed a treaty to keep providing the substance to the British while the British would cease selling it to the Chinese population. They kept selling it to the population…

(d) What was the "French Connection"?

The French Connection was a Corsican mafia operating in Marseille. They used to import the Opium from Turkey where it grew. The heroin was processed in Marseille and then exported to the USA.

Once the French Connection was dismantled, the traffic moved to the Golden Triangle, and then to the Colombians from cartels to cartels, and then to Mexico.

(e) What was the "Golden Flow", why was it developed?

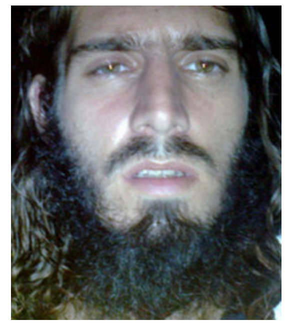
The Golden Flow was the first wide-spread urine testing performed on the US soldiers in Viet Nam. There seems that, unfortunately, drugs were a problem in the young US troops deployed in Viet Nam. IF the soldiers wanted to leave Viet Nam to come back to the USA they had to pass the urine test. If it turned positive, they had to stay in Viet Nam until they were clean.

In my opinion, this practice was immoral, threatening a young US soldier to stay in the mud, to cover another immoral action: the US Army let this phenomenon happen and amplify. There seems that questionable usage of drugs has widely been used in many armies around the world.

5. What is a homegrown terrorist? Give two examples of individuals who meet this definition and the acts they committed to gain this recognition.

A **homegrown terrorist** is more likely an American citizen, raised on the US soil, who joined foreign terrorist organizations like Al-Quaeda. He can travel extensively inside and outside the USA without questioning or investigation. He is also able to blend into crowds without raising suspicion. He is quite knowledgeable in US infrastructures, English language, mores and customs. Such profile looks appealing for extremists.

Colleen LaRose (aka Fatimah LaRose, Jihad Jane), is a US citizen, apprehended for conspiracy to kill in a foreign country, attempted identity theft and making false statements to a government official. She was attempting to recruit fighters for violent jihad in South Asia and Europe.



Omar Hammami (aka Abu Mansoor Al-Amriki) is an American-born US citizen promoting jihad through appealing hip-hop lyrics appealing to youth. He has been developing attacks strategies with top Al-Quaeda officials and is a celebrity of the Al-Shabab group in Somalia where he lives.

The Trial Process and the Investigator as a Witness

1. Why must a criminal investigator know the rules of evidence?

A criminal investigator is expected to know the rules of evidence for the following main reasons:
- he has the responsibility of collecting and preserving evidence that will be used in a court of law
- he must be able to distinguish between factual material that is admissible in court vs. worthless material
- he must know the specific terminology which is not the same one a layman is accustomed

2. What is the hearsay rule and why does it exist?

The **hearsay** rule is a testimony in court that repeats what others were heard to say, or in other words testifying to a second version of what actually happed. **Reliability** and **trustworthiness** are difficult to assess in such testimonies, hence leading to reject them in many cases.

Hearsay testimony is mainly excluded because of the following characteristics:
- the second hand testimony can be altered caused by poor memory or to exaggerate the facts
- inaccuracy, unreliability, untrustworthiness of the testimony
- inability of the judge and jury to observe the conduct of the first hand person
- impossibility to the defendant to cross-examine the first hand witness (6th amendment of the Constitution)

Note that a few exceptions to the hearsay rule exist like confessions, spontaneous and excited utterance or dying declarations to cite a few.

3. Describe the manner in which circumstantial evidence is used in a criminal prosecution.

Circumstantial evidence, or **indirect evidence**, encompasses all evidence other than direct evidence, provided that it logically connects the defendant to the crime.

It is used in criminal case by inferring from a series of known facts the existence of an unknown fact. The process of **deductive reasoning** is used to logically draw from the series of indirect evidence an incriminated conclusion.

4. What factors affect the credibility of the investigator as a witness?

A law-enforcement officer is not entitled to any more credibility in the courtroom than any other witness. Nonetheless, in the eyes of the public their testimony shall be spotless, forgetting that they are also human-beings with a human-being memory. These factors may be overcome with a thorough preparation of the testimonies.

Follows a few factors affecting law-enforcement officers' credibility:
- Investigators regularly deal with similar criminal cases creating some difficulties in the testimony
- Many citizen expect perfection from the officers in their testimonies
- Some jurors may be suspicious in the motives of their testimonies
- Emotional behaviors like a smile to the general attorney or frowning at the defendant

5. What are the characteristics of a good [law-enforcement] witness?

The characteristics of a good witness are based on adequate preparation of the case, familiarity with the rules of evidence and being acquainted with jury behaviors. People start forming opinions as soon as the witness enters the courtroom.

Preparation for testimony: ensuring that complete investigation was conducted, ascertaining the facts objectively, preparing complete and accurate notes on information and evidence gathered, reviewing all notes and rehearsing before testifying.

Understanding the Jury: understanding that jurors are human-beings subject to influence, beyond the facts demeanor matter a lot like the clarity and the professionalism of their presentation and the way they answer to cross-examination.

Appearance and demeanor: a degree of formality shall be observed without any signs which may offend a juror. Personal hygiene should also be scrupulously observed as well as the manners as soon as they enter the courthouse.

Taking the witness Stand: walking naturally, looking straightforward without smiling or frowning, trying to contain nervousness.

Answering Questions: answering questions straightforward without emotion or partiality with positive, firm and assertive answers while looking at the jurors in the eyes

Cross-Examination: the purpose is to ensure that the testimony is accurate and truthful. The credibility of the witness is attacked using different tactics. The witness shall be aware of these techniques remain confident, truthful, assertive and open-minded.

Use of Notes on the Stand: using notes is permitted to refresh one’s memory on a specific point in the file. If they are used because the witness doesn’t remember the facts, the testimony becomes worthless and the notes shall be submitted as evidence to the parties.

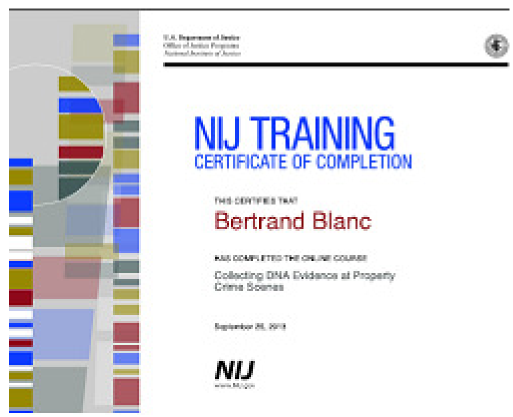
Leaving the Witness Stand: as important as the entrance, the departure shall give a good impression of professionalism to the jurors. The witness shall be excused by the judge and shall leave the room without smiling, speaking or glaring.

On-Line Training & Courses

The Forensic Training Network
NIJ-F01 Forensic Fingerprint Analysis Basics

The goal of this training is provide a basic understanding of fingerprints and their role in forensic science. After completing this training, you will have gained a basic understanding of the anatomy and development of friction ridge skin. You will understand why fingerprints are permanent and unique. You will be able to recognize various levels and types of details used for fingerprint classification and comparison. You will understand why and how fingerprints are used in criminal investigations. You will have gained a basic understanding of biometric fingerprint recognition and the method used to manually compare fingerprints and draw conclusions. Finally, you will be aware of existing quality assurance guidelines and related resources.

National Institute of Justice
Collecting DNA Evidence at Property Crime Scenes

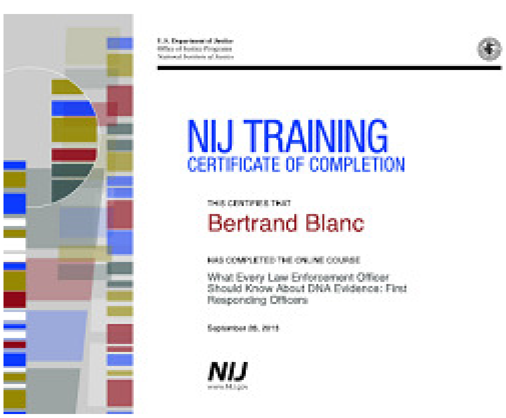


This interactive training program is delivered in four modules:

- Types of Evidence.
- Crime Scenes.
- Evidence Collection.
- Combined DNA Index System (CODIS).

Those modules introduce and describe the following key concepts:

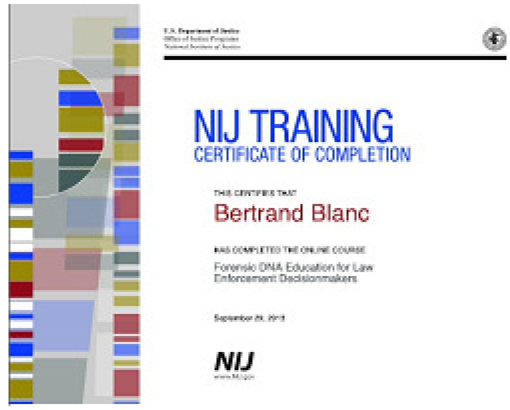
- Types of physical evidence frequently encountered at a property crime scene.
- Methods used to maintain the integrity of evidence.
- Types of crime scenes and the methods used to search and document crime scenes.
- Process used to collect, mark, and package biological evidence.
- Crime scene reporting.
- CODIS operated databases.



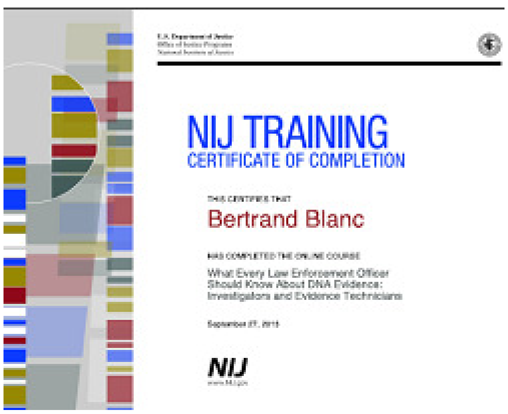
National Institute of Justice
What Every First Responding Officer Should Know About Forensic DNA

This course focuses on issues that arise for the first-responding law enforcement officer and is intended to provide interactive training that covers basic information about the identification, preservation, and collection of DNA evidence at a crime scene. Recommended practices covered in this tutorial module may not be applicable to all situations or crime scenes. You should apply local department or agency procedures or applicable laws that govern the use, collection, and processing of DNA evidence.

National Institute of Justice
Forensic DNA Education for Law Enforcement Decisionmakers



The objectives of the course are to educate senior-level law enforcement decisionmakers on the policy and practice issues associated with the effective use of DNA analysis so they will have the knowledge to:
Streamline investigative processes
Implement best practices for handling "cold hits"
Identify the probative value of evidence and prioritize DNA evidence
More effectively leverage limited resources
Interact more efficiently with crime laboratories to set expectations and manage caseloads
Understand the time and resources required from the lab to test different categories of evidence
Avoid the steep costs that can impact the agency, the public and the practitioner's career if procedures aren't properly implemented



National Institute of Justice
What Every Investigator and Evidence Technician Should Know About Forensic DNA

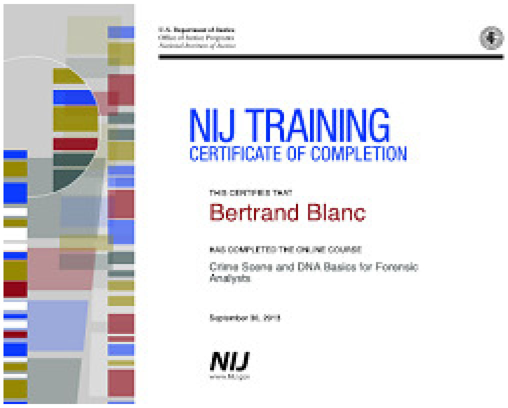
This course delivers more indepth information for the investigating officer and/or evidence technician and is intended to provide interactive training that covers basic information about the identification, preservation, and collection of DNA evidence at a crime scene. Recommended practices covered in this tutorial module may not be applicable to all situations or crime scenes. You should apply local department or agency procedures or applicable laws that govern the use, collection, and processing of DNA evidence.

Forensic Training Network
DNA-110 Essential Aspects of Forensic DNA Testing

The main goal of this course is to provide students with an understanding of the important role DNA plays in forensic science; introduce the steps involved in forensic DNA testing using the latest methods and technologies; and provide a basic understanding of the National DNA database system.
Agenda:

- Fundamental Biology & Genetics
- Forensic DNA Applications
- Forensic DNA Laboratory Systems
- Forensic DNA Testing Overview
- STR Analysis Workflow
- DNA Databases and Cold Hits
- Additional Forensic DNA Testing Tools

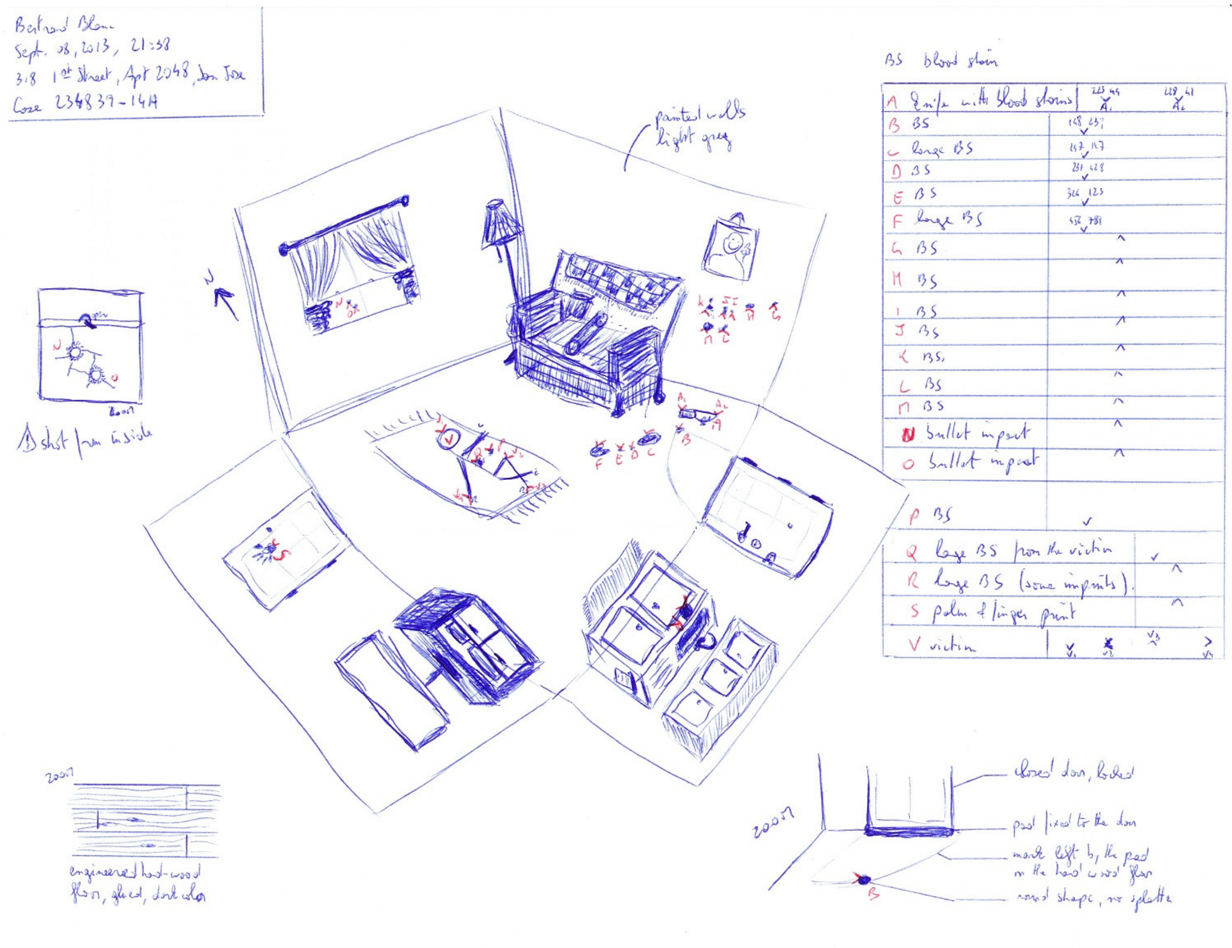
Funded under NIJ Award Number 2009-DN-BX-K175



National Institute of Justice
Crime Scene and DNA Basics

This course provides information in the two lessons *Evidence at the Crime Scene* and *History and Types of Forensic DNA Testing*.
The first lesson addresses the importance of documenting, protecting, and preserving the scene and what types of evidence can be found there and methods used for its collection and preservation. The second lesson addresses the historical use and disadvantages of restriction fragment length polymorphisms (RFLP), the method and sequence of steps in which DNA profiles are developed, and the concept of short tandem repeats (STR) testing and its advantages over earlier methods.

Sketching a Crime Scene



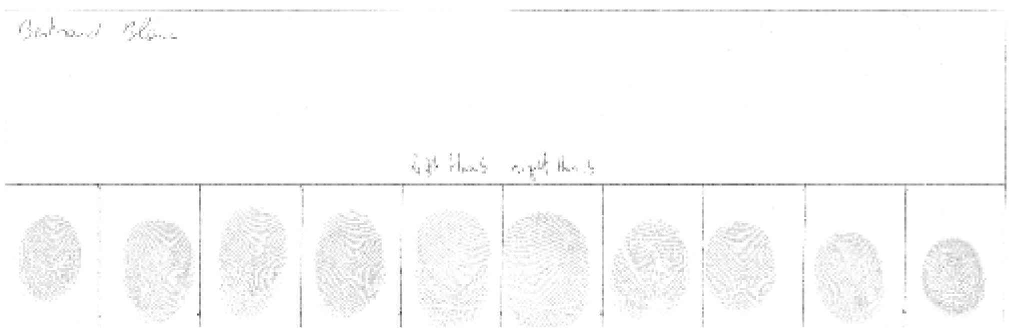
Latent Fingerprints Identification

I've received a Latent Fingerprint Development Kit today from ArrowHead Forensics (www.crime-scene.com), one of the numerous forensic supplier web-sites found on the internet.

First of all, I was disappointed because dusting a surface to obtain fingerprints is not easy: often I didn't get any fingerprint even though I knew there were some. It should depend on the surface. When I get some fingerprints, lifting them was not easy either, I messed up a few before getting one relatively acceptable. The powder goes everywhere, I put a mess everywhere, I'm wondering how the forensics are doing not to contaminate a crime scene. The powder which is very convenient and which is doing the less mess is the magnetic one.

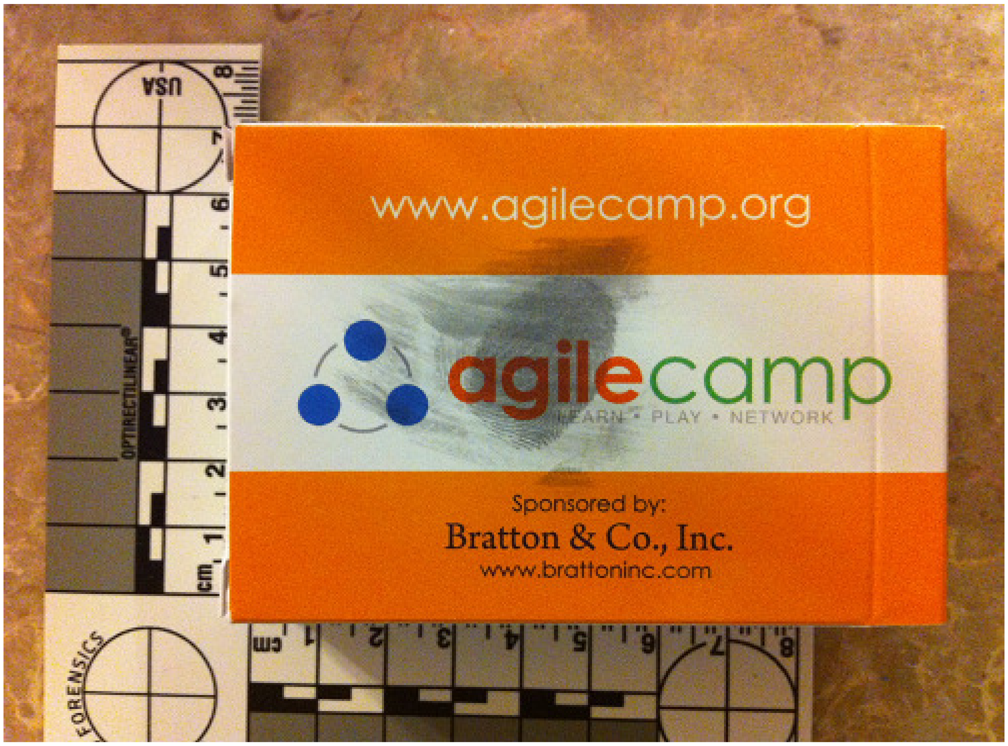
I mocked up the following steps, wondering who touched the cards deck.

Identification Card: Bertrand Blanc

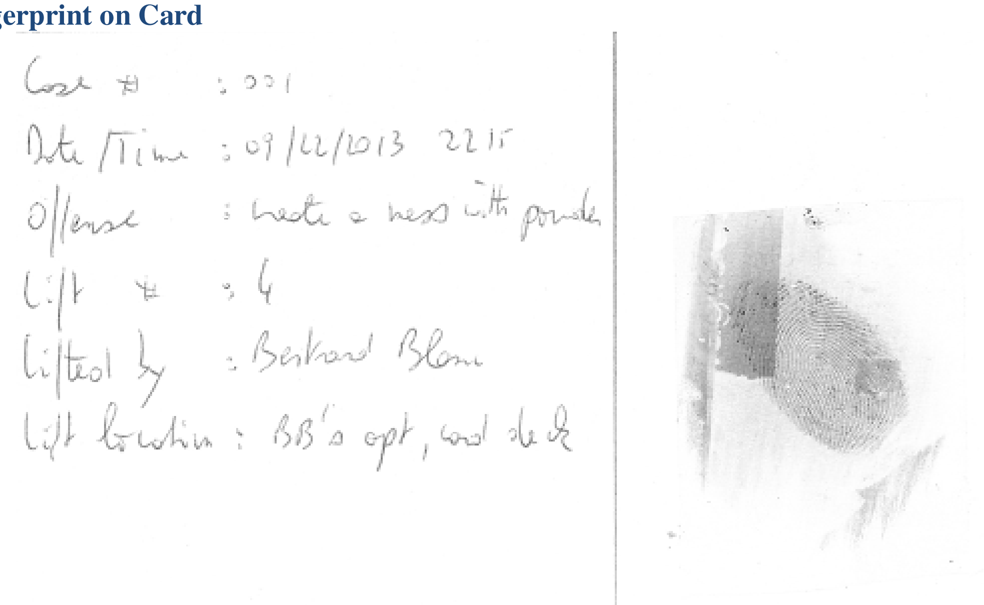


Picture of the Evidence before dusting

Picture of the evidence after dusting

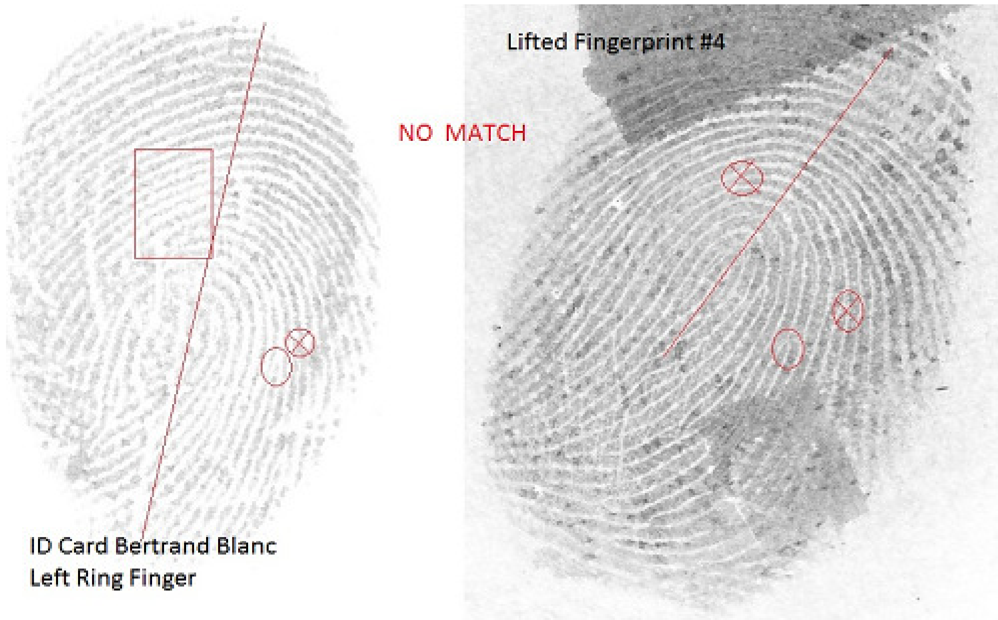


Lifted Fingerprint on Card



Fingerprint Comparison #1

Barely found any point of comparison. Found many ridges which didn't match: present in one fingerprint but not in the other.



Fingerprint Comparison #2

Easily found 12+ matching ridges around the loop pattern.