

A Scientific Approach to Crime Scene Investigation

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Abstract: *Crimes investigation is crucial part for any investigation. It is a meeting point of science, law and logic. crimes investigations contain multiple steps, starting from visiting the scene to collecting the evidence and documenting each of them before analysing. It is a long, tedious, process that involve useful documentation, photography or video of the situation or the condition on the scene and point of the evidence the collection of any physical evidence that will possibly remove the darkness evidence and illuminate what had happened and point of how and who did it. every crime scene CSI you need to handle the division between field work and lab work differently. all crimes investigator and not forensic scientist. Some investigator work in the field review is to purpose, practical approach and guidance to help Forensic and law enforcement professions to deal with crimes scene evidence to avoid contamination, degradation and loss of valuable of evidence.*

Keywords: crime scene investigation, evidence collection, forensic science, law enforcement, documentation

1. Introduction

The investigations of any criminal case begin at the crime scene with the help of identification and recovery of physical, biological or chemical evidence. After analyse and evolution of the result of recover physical evidence and documents as well as the statement of fitness, it proceeded to presentation of all the finding to the court of law. The forensic process like identification, recovery collection, preservation, transportation and proper documentation to maintain the chain of custody is very crucial. Crime scene investigation is a process at recording the scene because it is a first encounter and identify and collection of physical evidence to the solution of the case.

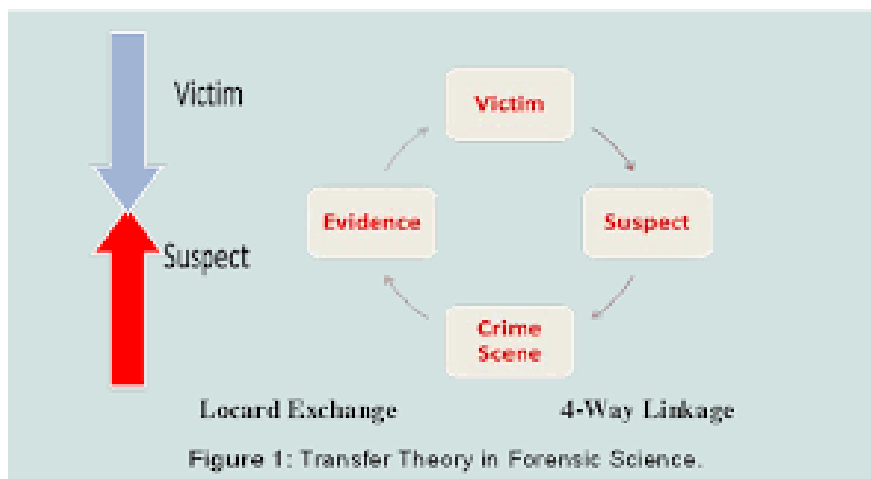
The investigation start with the first responding Officer. First responding officer is Officer who gave the information about the crime on the phone call or personally at the police station. the duty of first responding officer is to reach at the crime scene as soon as possible and secure the entire scene with the help of barricades and ensure that no one cool enter into the crime scene. The integrity of the crime scene and the evidence shall be preserved. The first responding officer has to do some basic recovery procedure before the arrival of the crime investigator. If there risk of evidence being destroyed, lost a contaminate in situations where thereby no prospect for the crime scene to be proceeded by crime scene investigator responsibility of the first responding officer might need to be extended beyond preservations and documentation. Documentation can be done using the video camera and photography of each and every evidence at the same.



Crime scene do not cross

Useful information from physical evidence in criminal investigation: - the objective of the crime in investigation is to analyse the each and every evidence and to link it with suspect, victim, scene. Forensic laboratory examined physical evidence to provide the investigator with information about the evidence found at the scene and help to solve cases.

- 1) Information on the corpus delicti: - this is the determination of the essential fact of an investigation, the physical evidence, the pattern of the evidence and type of evidence. The red brown stain in a kitchen may be significant to an investigation but maybe more than 11th. If the DNA match that of the victim.
- 2) Linkage of person, scene, object: - the local exit principal state that whenever two object come in contact together, a mutual exchange of matter will take place between them. linking suspect to a big team is the most important and common type of linkage accomplished by physical evidence in a criminal investigation linking victim and suspect to object and can also be a recognised by using the physical evidence.



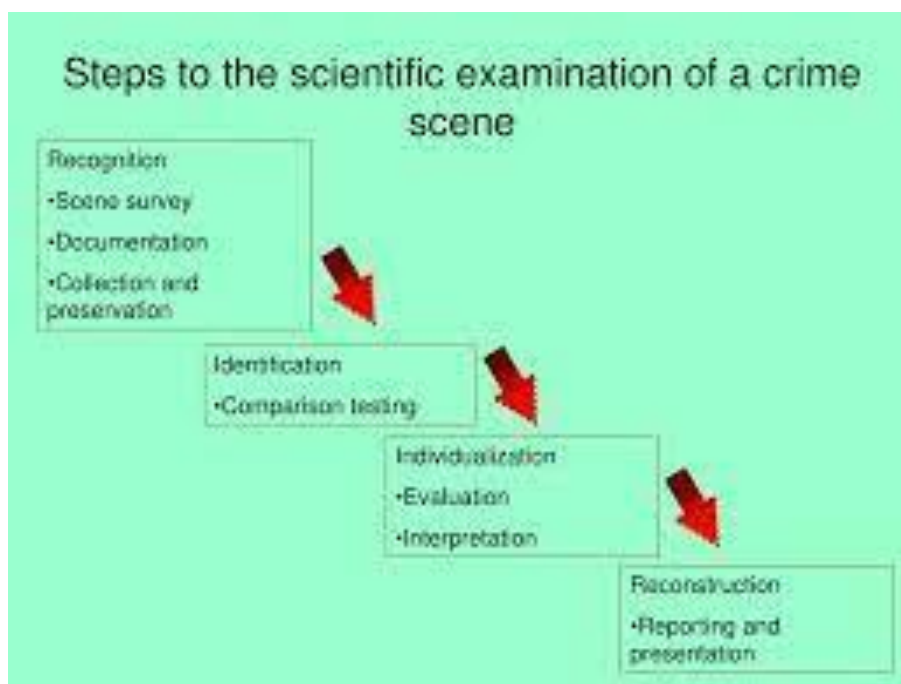
linking suspect, victim, scene.

- 3) Identification of suspect: - currency examination is a process of steps. consist of identification, documentation, collection, transportation, preservation and evaluation. identification of a suspect is accomplished by the first three steps that result in individualization of the source of an item of physical evidence. The best example of comparison in the individualisation is by comparison testing of fingerprint evidence re advancement made in artificial fingerprint identification systems database.
- 4) Reconstruction of crime scene: - this is the final step. In the different examination process. The crimes investigator is frequently reconstruct the scene to get the information about the events occurred during the crime. It help investigator as well as prosecutors to understand the entire scene and make decision for the justice in the court of law.

steps to process a crime scene. It is dynamic process involves recognition of the scene. In crime scene we have different kind of scene based on the type of case we got. It is very crucial process as evidence contain lot of evidenterly vale. The type of evidence we get from the scene is physical, biological, chemical evidence. So as soon as we reach to scene the first step would be general observation of the scene. In general observation, look for the condition of door window, switches and the general movement in the room. after that start the documentation of an evidence, documentation is required in any crime investigation because it capture the evidences in a digital form. So if we need to reconstruct in a later time, it will easier for us to make a scene has original. more documentation can also help to solve many cases by providing to the jury in a court of law. During expert testimony, documentation, wall, photography, video sketching. after that collection of the evidence should be conducted but one thing should be noted. That collection should be done with the help of gloved hand and proper instrument. after the collection, preservation and transportation of the evidence should be done in the forensic science

Steps to investigate crime scene in scientific method: -

First informer crimes investigation is not a mechanical process related to technicians who go through the series of



Step to the scientific examinations of crime scene.

First responding officer: The first responding at the crime scene are usually police officer. First responding Officer as a person who first visited the scene with the police, constable and staff. The duty of the first responding officer is to secure the scene as soon as possible and to restrict the entry of any unauthorised person into the crime scene. apart from that first responding officer will mail or call Forensic team for the crime analysis. secondly if any medical emergency is required then they should call upon a ambulance or there is a fast situation, then fire brigade as soon as possible before any serious damage to same or any person or citizen.

Protection of the scene: The most crucial aspect of conducting a crime investigation is to protect the same from an unauthorised persons. The crime scene is required to protect strongly until all the evidences recorded and collection from the crime scene to avoid contamination and maintain the integrity of the evidence. The successful prosecution of the case may depend on the condition of physical evidence at the time of its collection and position of the evidence. The production of crimes in begin with the putting a bar gates over the scene and deploying some constable police to report of entry and exit of crime scene. The protection of frame and begin with the arrival of the first founded by putting barricades. If the crimes happen in often house or a dome than the only that area will be protected and barricade if it was an out crime, then the first respond officer have duty to recognise the portion to be protected the crime scene and any other area that may recover valuable. Evidence should be close to prevent any further disturbance of the scene and contamination of potential physical shot on authorised person will not be allowed in any crime scene because it can break down the chain of custody and change the entire case into different direction.

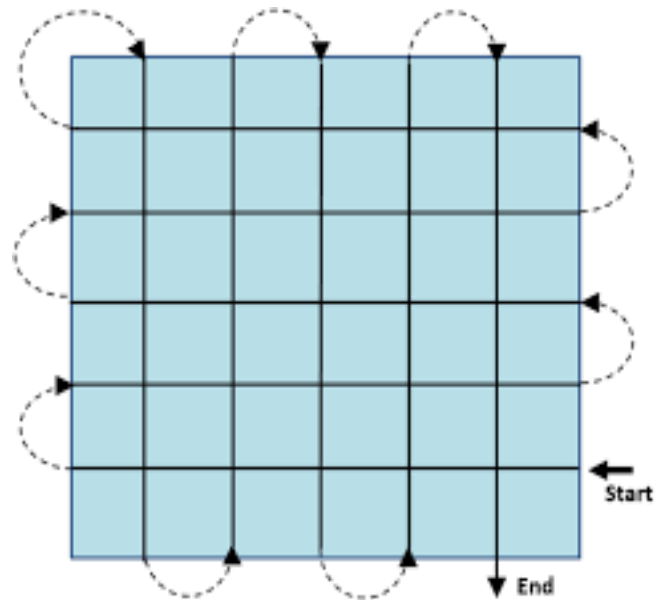
Physical evidence: There are two type of evidence that recover from most of the crime scene. Testimonial evidence and physical evidence. Any witness for an incident will represent testimony in the court of law. Physical evidence refer to any material item which used to committed a crime that ultimately violate a law called the physical evidence in some cases like rape or murder we can find the cement saliva blur in all this cases the collection of physical evidence from the crime scene is very crucial in the interest of establish the following note information.

- 1) A physical evidence may prove that crime has been committed.
- 2) The physical evidence, establish the connection between the suspect victim and crime scene.
- 3) Else establish identity of suspected victim.
- 4) A quite innocent from the case.

Crime scene searching method: Identification and recovery of physical evidence is the main part of the crime investigation in spite of view appropriate searching method to apply to type of crime scene. There are number of such pattern that may be following the interest of investigation of crime scene. Some of them are as follows.

- 1) Strip method. Whole area often crime scene will be search Anti into con number of strips. Each strip should be

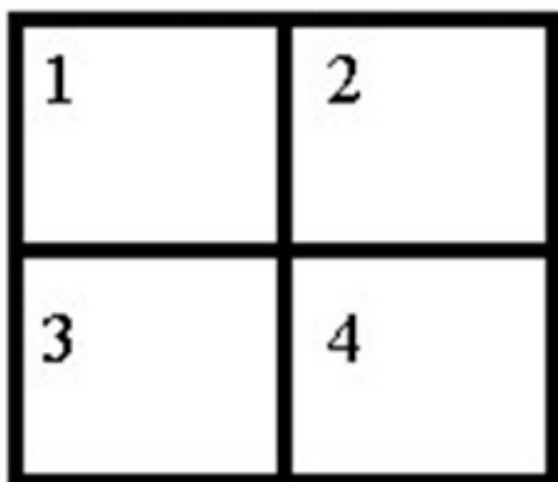
examine carefully. The process continue until the search covered scene.



Spiral method: - rhymes investigator start from one and a point of outside the area of the crime scene move along with the path of this spiral deal. They search the centre of the crime scene each and every angle should be search.



method, the crime scene is divided into several Jones and each is examine in to the big square is then convent subdivided into small, square and search of every small square carefully. this is basically used in the outdoor crime scene because it was very big.



Grid method: in the search by horizon line he search back to the right angle to the original path. The search method from two different angle help in recalling of evidence which may in simple strip method.

Sketching of the crime scene: Sketching is another form of documentation of the crime scene with the evidences and measurement. sketching should be divided into two parts drop sketch and final sketch. Rough sketch will be taken during the same investigation with a proper measurements and final sketch should be done in different lab with the help of proper scale. the sketch is conveyed to appreciate evidence. The crime in the nature of crime and demodulator of the commission of crime. The sketches provide simple idea and easily understand the scene. Supplement of the other, other, more of the recording, the crime scene by videography photography and writing inspection report.



Photography of the crime scene: - after the preliminary examination of the crime scene, it will be recorded with the help of photography and video. the photography and video held investigator to reconstruct the crime scene if necessary related on during investigation. Photography also helped investigated to provide proof of evidence at the crime scene to the court of law. During the trials photography shall be properly. Both the photography and photography of the crime scene will be taken systematically. The photography of any physical evidence like Fiber fingerprint blur. Footprint should be done with the help of specialised lights, the overall medium, inclusive view of the scene as well as evident should be photograph successfully with the suitable scale. The photograph should be taken from the islands when feasible so that the exhibit the same has it will be observed by the normal view. The physical shall be photograph in the place before its collection and packaging using a size determination device if necessary.



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