

Crime Scene Reconstruct 'A major part of Criminal Justice System

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ABSTRACT

A crime scene is a location in which a crime has been committed or any physical scene, anywhere, that may provide potential evidence to an investigator. Crime Scene Reconstruction is a way or method for determining the sequence of events that occurred at the crime scene. The study and interpretation of scene patterns, as well as the inspection of physical evidence, can be used to reconstruct crime scenes. Crime scene reconstruction by the observation, evaluation of physical evidence and statement by the individuals involved in the incident. The physical evidence left at the crime scene plays an important role in reconstructing the events that occurred surrounding the crime. The foundation of reconstruction is the collection and documentation of physical evidence. All images from the incident, as well as autopsy and physical evidence, will be required for a comprehensive reconstruction. It's also a good idea to get some notes, measurements, and sketches of the crime scene. Any reconstruction is only as good as the data available. Blood spatter interpretation, shooting reconstruction, accident reconstruction, and sexual assault reconstruction are some examples of different types of reconstructions. Data gathering, hypothesis generation, examination/ testing and analysis, evaluation of the significance of the evidence, and theory formulation are the five processes in crime scene reconstruction. It involves dealing with new evidence as it comes up and navigating through a maze of falsehoods and deception to uncover the most accurate account of what happened and how it occurred. It helps investigators in interpreting and exploring evidence, and it may be utilized to identify and prosecute criminals in a court of law.

Keywords: Crime, scene, reconstruction, physical, evidence.

INTRODUCTION

Crime scene reconstruction is the reconstruction of a crime scene in order to understand what happened during that time period.

The application of scientific methodologies, physical evidence, deductive reasoning, and their interrelationships to achieve specific knowledge of the set of events that surround the commission of a crime is known as crime scene reconstruction. The study and interpretation of scene patterns, as well as the inspection of physical evidence, can be used to reconstruct crime scenes. Scientific scene analysis, interpretation of scene pattern evidence, and laboratory inspection of physical evidence are all part of reconstruction, as is methodical investigation of related data and the logical creation of a theory. At its most fundamental level, crime scene reconstruction aims to address the following questions: what happened and how it happened, where did it happen, how did it happen, when did it happen, who was involved, why did it happen?

INFORMATION NEEDED FOR RECONSTRUCT THE CRIME SCENE

In general, it is preferable to arrive at the scene as soon as possible after the occurrence. Physical evidence, witness testimony, and expert reports may all provide information. All scene pictures, autopsy protocol and images, measurements, drawings, notes, reports, and objects of evidence should be examined by the Reconstructionist (Everett and Jr. Baxter, 2019). The

scene must be documented completely and accurately. This might contain things like the height and vertical/horizontal angles of bullets into a wall, or the length and width of a bloodstain, depending on the sort of reconstruction being done.

IMPORTANCE OF CRIME SCENE RECONSTRUCTION

Limiting the alternatives that resulted in the crime scene or physical evidence as encountered is frequently beneficial in determining the actual path of a crime. One key reason for preserving the integrity of a crime scene is the potential necessity to recreate the incident. Reconstruction is predicated on the power to form observations at the scene, the scientific ability to look at physical evidence, and therefore the use of logical approaches to theory formulations. Reconstructing specific facts or elements of events without being able to recreate all of them (for a variety of reasons) might give useful information to the investigation and eventual prosecution of a case. Crime scene reconstruction is one of several profiling strategies used to create an offender profile or solve a crime. It helps in establish what happened and to identify the responsible person. Reconstructions are often utilized in courtrooms to assist the jury in understanding the character of a criminal offense.

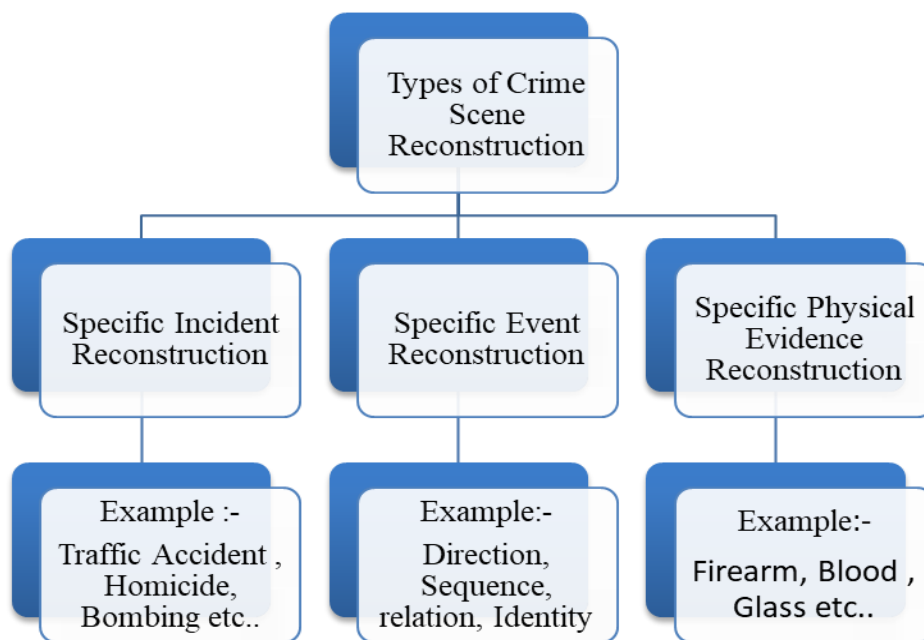


Figure 1 - Types of Crime Scene Reconstruction with example

FORENSIC EVIDENCE RECONSTRUCTION AT THE CRIME SCENE

When a crime occurs, a crime investigation team may be required to collaborate with the forensic department since the forensic department does various studies on evidence that can only be done by them or and who used science to investigate the crime scene or analysis evidence. Evidence is anything found at the site of a crime (blood, fingerprints, eyewitnesses, papers, tools, murder weapons, etc.) that gives relevant facts and information, basically helping the court in reaching a certain judgement and forming an opinion about anything. It is the key that the court need in order to reach a specific judgment. There are several forms of evidence: biological, physical, tracing evidence, and circumstantial evidence. To avoid contamination, careful searching, collecting, and packing are required during crime scene management [Gardner and Tom, 2009]. When evidence is properly evaluated, it might serve as a beginning point for a criminal justice case. Evidence is vital in the criminal justice system and in the solving of crimes, however if the reconstruction is to be completed, the right location and positioning of evidence is required.

The essential stages of evidence reconstruction are recognition, identification, individualization and reconstruction of the evidence. Whatever evidence is collected from the scene, making a list of evidence with necessary information (size of blood pattern, position of evidence, and measurements), even the smallest trace of evidence is collected from the document prepared by the investigator officer and first responding officer, which is evidence recognition.

Recognition: -Any kind of forensic analysis normally starts with recognition of relevant evidence and separating it from materials that have not any evidentiary value. No further reconstruction may take place unless the relevant evidence is recognized. When relevant physical evidence is recognized, the investigator should always make every attempt to properly document, collect, and preserve the evidence.

Identification: -Identification is a comparison procedure that compares the physical, morphological, chemical, and biological features of a standard object or known substance to the physical, morphological, chemical, and

biological properties of the evidentiary item obtained from the crime scene.

Individualization: - It refers to demonstrating that a given sample is distinct from others in the same class. It may also apply to proving that a questioned piece of evidence from a crime scene and a comparable known sample of evidence have the same source. The nature of individual characteristics varies from one type of evidence to another and also distinguish members of the same class.

Reconstruction: - The analysis of physical evidence for recognition, identity, and individualization, as well as the conclusions formed from it, are essential parts of a final reconstruction.

PROCESS OF CRIME SCENE RECONSTRUCTION

In Crime Scene Reconstruction there are number of steps which are need to be followed

- 1) Recognition of physical evidence which are essential for reconstruction
- 2) Proper documentation of physical evidence
- 3) Collection of various evidences
- 4) Laboratory examination of evidences essential for reconstruction
- 5) Data analysis collected from crime scene
- 6) Synthesis of the analysis

RECOGNITION OF THE PHYSICAL EVIDENCE

The reconstruction of the crime scene begins with the arrival of the first responding officer. The acts of the first responding officer and his team define the quality of their efforts in all reconstructions. The processing team must identify the evidences that will be useful in reconstruction.

PROPER DOCUMENTATION OF CRIME SCENE

The properly document the evidences using notes, photographs, and sketches, which will serve as the foundation for reconstruction. Notes should be taken to record all of the acts that occur at the site. In addition, photographs and sketching aid in the documentation of the crime scene.

COLLECTION OF THE PHYSICAL EVIDENCE

Once the evidence has been identified, it is properly collected and preserved. Improper collection may result in

damage, compromise, or contamination of the evidence and the information associated with it. Evidences are properly collected, packaged, and labelled before being dispatched to the laboratory for laboratory investigations.

Laboratory examinations of physical evidence

Coordination between the analyst, investigators, and reconstruction analysts is essential for successful analysis of evidence. All of these sources of information are required for a proper laboratory analysis.

Data analysis

Once the crime scene has been documented and laboratory analysis has been completed, reconstruction analysts use data analysis of the evidences present at the crime scene to determine what events occurred during the commission of the crime. This research includes statements from eyewitnesses, information acquired from investigators, and laboratory analysts. Once all of the events have been established, a hypothetical scenario is created that describes all of the occurrences in their proper sequence.

SYNTHESIS OF ANALYSIS DATA

Once the hypothetical scenario has been prepared, the components are tested using various examinations or logical analysis to assess the scenario's validity (Peterson et al., 2011). If it explains all of the events determined by reconstruction experts, the analysts expose it to critical inspection in order to rule out possible explanations for the incidents. If no reasonable answer is found, the theory is considered as sound reconstruction.

Role of first responding officer in crime scene reconstruction

The first responding officer should approach and enter crime scenes hastily but cautiously, keeping an eye out for any people, vehicles, events, possible testimony, and environmental conditions.

First Responder: -

- a) Note or log dispatch information (e.g., address/ spot, time, date, kind of call, persons involved) by the first arriving officer.
- b) Keep an eye out for anyone or anything leaving the crime spot.

- c) Approach the spot with caution, examining the embracing area to assess the situation correctly, and taking note of any probable secondary crime scenes. Keep an eye out for anybody or anything that could be connected to the crime.
- d) Before advancing, make first observances (look, hear, smell) to assay the area and guarantee officer safety.
- e) Maintain mindfulness and alertness. Assume the crime is ongoing until it's shown else.
- f) Treat the situation as though it were a crime scene until it's examined and decided else.

Safety Procedure

The first responding officer primary responsibility is the safety and physical well-being of police and other persons in and around the crime scene. The first responding officer on the scene must identify and manage any threatening circumstances or people.

Emergency Care

Following the restriction of any dangerous conditions or objects, the first responding officer's coming obligation is to assure that injured victims seek medical help while helping defilement of the area.

Secure and Control Persons at the Scene

Controlling, linking, and removing people at the crime scene, as well as limiting the number of people who enter the crime scene and their mobility, is an important duty of the first respondent in securing the crime scene.

Boundaries Identify, Establish, and Secure

Defining and managing boundaries helps for the protection and security of the crime scene. The number and boundary of crime scenes are defined by their spot and the kind of crime. Boundaries must be set beyond the original dimension of the crime scene, with the idea that they may be reduced in size if demanded but cannot be increased as rapidly.

Turn over Control of the Scene and detail Investigator in Charge

Briefing the investigator in charge helps in the supervision of the crime scene and the establishment of further inquiry liabilities.

Document address and conformities

The confirmation must be kept as an endless record, observances of the crime scene, like as the positioning of people and goods within the crime scene, the appearance and state of the scene upon coming conditions (for specimen- lights on/ out, tones over/ down, open/ unrestricted; doors and windows, portable cabinetwork; climate; temperature; and particular goods). testimonies, victims, suspects, and any reflections or commentary made give particular information.

The observances and documentations attained at the crime spot form the majority of the reconstruction. The first responding officer's report is the starting point for crime scene reconstruction. However, it might distract the researching police or the illicit justice system (Miller, 2011), If the first responding officer's report is inapplicable to the incident. Reconstruction can be carried out by establishing the individual- relationship that the first responding officer truly observes. As a result, the first responding officer is important in the reconstruction process.

WHY CRIME SCENE RECONSTRUCTION IS IMPORTANT IN FORENSIC SCIENCE AND CRIMINAL JUSTICE SYSTEM

Crime scene reconstruction is important because it assists investigators in interpreting and investigating evidence, and it may eventually be utilized to arrest individuals and prosecute them in a court of law (Moorthy, 2020). Crime scene reconstruction involves observation, experience, data collection, and scientific methodologies to offer a likely explanation for the crime occurred. Investigative forensics is the key to solving a crime or convicting a criminal. Analyzing a crime scene to determine what evidence should be collected and then reviewing that evidence in a laboratory is what investigative forensics is all about (Robert and Plotkin, 2017). Crime scene reconstruction, as conducted by crime scene investigators and detectives, is fitting puzzle pieces together, with the puzzle pieces being fragments of evidence and the puzzle being the who, what, when, where, and why (Avenue North Largo, 2013).

CONCLUSION

The process of identifying the sequence of events that occurred during and after a crime is known as crime scene reconstruction. The study and interpretation of scene

patterns, as well as the inspection of physical evidence, can be used to reconstruct crime scenes. The importance of physical evidence and recording of the crime scene by experts in the field for reconstruction purposes cannot be overstated. To reconstruct the events of a crime, the reconstruction analyst relies on accurate and full information. It requires as much logical thinking as it does physical data and lab test findings. A crime scene investigator must always approach a crime scene with an open mind, prepared to wait until all feasible evidence is acquired before jumping to conclusions or refusing to accept alternate alternatives. Crime reconstruction techniques are especially useful in criminal investigations and the criminal justice system, as they can provide meaningful evidence or any evidence that has not previously been observed, or we can say that the reconstruction method can be used to obtain new findings and traces in unclear cases. It also enables for a cross-disciplinary assessment of existing traces and findings, allowing up completely new dimensions and views. In the court system, crime scene reconstruction is important. Crime scene reconstruction can take place in any location or space that has the necessary requirements, which were previously mentioned as the physical way of reconstruction.

Conflicts of interest: The authors stated that no conflicts of interest.

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