

Scientific Investigation in Criminal Justice System: A Need of the Hour

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Abstract: A scientific investigation is a plan for asking questions & testing possible answers. It begins with observation, interpretation of data using scientific methods and then verifying the result of the analysis. "Forensic evidence starts at the scene", unrecognized and carelessly handled proofs at the scene will be unable to identify truth foolproof for crime. Coupling of criminal investigation scientific methods not only help in careful long term data storage but also it will prevent an innocent gating punished and will put the actual convict behind the bars.

Keywords: Criminal Justice system, Scientific Investigation

I. DEFINITIONAL ASPECT

1. Forensic science is the application of the science to the criminal and civil laws enforced by criminal justice system. (Richard S. 2007, page-5).
2. Criminal investigation is the collection of information and evidence for identifying apprehending and conviction suspected offenders.

Today many believe that the fictional character Sherlock Holmes, who at first applied newly developing of cereology finger printing, five dreams identification had consideration influence on popularizing scientific crime detection methods before their value was first recognized and coupled by real life criminal investigation.

History of criminal investigation:-

Criminal the first ever photographic was clicked in 1843 by police in brussets. Alphonse Bertillon was called father. Of criminal identification as he applied series of body measurements to identify criminals.

Until 1900 it had been impossible to determine if a blood sample or stain is of human or animal origin. The blood groups technique was applied to criminal investigation in 1915 by Dr. heone.

To explain the scientific history of forensic in India starts from 1849 when the British first established chemical examiner laboratory at madras.

However, forensics as a scientific tool of crime detection was not used in ancient India, but crime was detected according to scientific perception observation and analysis of the situation, as mentioned in kautilya,s "Arthashastara".

Chapter (VII) of Arthashastara describes the ways of investigation of different unnatural deaths, like death by suffocation and suppression of breathing, killing by hanging, drowning, and iron weapon and also by poison.

During medieval India, the sultans implemented shariat or the Islamic law of crime based on Quran.

During Mughal period, crimes were classified into three categories crime against God, crime against severing, crime against individual.

Beginning of scientific measures for criminal identification in British India: -

socio-historical unrest acted as a major catalytic agent for initiating forensic science as scientific tool by the colonial empire for crime detection in British India.

When the British fully take over the administrative control after 1857 rebellion, their realized that instead of a single reform, the whole criminal justice system needed to be reformed. They drastically amended the whole Indian penal code and criminal procedure code in 1860. And subsequently new police Regulation Act come into being in 1861 to establish the justification by scientific certainty new scientific venture called forensic science was introduced.

II. FORENSIC INSTITUTIONS IN INDIA

In course of time, the nature and trend of crime changed according to social and political contest and to prove it scientifically different forensic institutions were established in different parts of India.

1. Anthropometric Bureau:-

New types of crimes like dacoity burglarly, thievery and even murder become a very common phenomena. Inspite of invention of photography the CID very often face problem of true criminal identification which intern lad to the introduction of anthropometric system for the purpose of true criminal identification. Anthropometric bureau was established in 1892 in Calcutta for maintaining records of habitual criminal & offenders.

2. Fingerprint Bureau:-

Some incidences happened where anthropometric system could not prove its excellence for criminal identification, in 1897, the world's first fingerprint bureau was established in the writers building, Calcutta, known as Bangal fingerprint Beureau. The main aim of the bureau was to standardize, the methods of recording, detection, classifying developing and preserving finger prints.

3. Serology department :

It was established to identify any red spot at the crime scene and to ascertain whether it is human or other animals' blood or something else.

Note Forgery:

In the year 1917 note forgery section under the CID, Govt. of Bengal, was established. The basic objective of this department was to identify the forged currency notes and to create awareness among the common people to identify the fake currency.

III. ORIGIN OF FINGERPRINTS IN INDIA

The earliest known written reference to palm reading are found in two ancient literatures of India the laws of Manu and Vasishtha rules. But in ancient India either palm or fingerprints or both were used mainly for astrological purpose and not for any criminal investigation. But during medieval period of Mughal rule, a common practice among rulers was to sign the routine documents and put their handprints of on official documents (farmers.)

The one and only inimitable and infallible marks of identification in human is fingerprint. The scientific study of finger print as a means of identification is called dactylographic.

There are about 80 ridge characteristics found in a finger print and at least 1/10 of these can establish the identity of a person.

In 20th century, there was a parading scientific shift from body to laboratory. It tries to highlight that how changing socio-historical and socio-political circumstances changed the concept of crime which altered the whole criminal motivation perspective. Consequently, the forensic institutions were transformed into crime regulation authority integrating crime investigation to administrative system.

The commissions appointed on reforms of criminal justice have reiterated that the infusion of technology in crime detection can help the system to function efficiently.

The main motto of criminal justice system is to provide fair justice. For it forensic evidence is more authentic than acular evidence. Forensic science prove to be a scientific boon to criminal justice.

IV. APPLICATION OF FORENSIC INVESTIGATION IN CRIMINAL JUSTICE:

When it comes to the level of investigation no matter what will be the level of severity of the case nothing can prove to more beneficial to the crime investigator than the we & implementation of the principles of forensic science. The results of throw forensic investigations can mark the difference between the acquittal and conviction in the court of law.

1. Identify truth :

It helps to interrogate suspect victim and even witness to get the truth neurological tests i.e. hyprosic, psychological detection of deception, narco, analysis and brain mapping has revolution the police investigation saving time, money and effort and providing for superior results.

2. More humane investigation :

The scientific method of interrogation has made the interrogation more human and legal, there by eliminating notorious third degree methods.

3. Preservation of data :

Presently, nations all over the world have resorted to a liberal approach towards the accomplice of the scientific techniques and the importance of these techniques in criminal investigation can be gathered from the fact that it does not need further justification. This scientific investigation helps in developing a link between the past and present of the crime what known as corpus dialectic or the body of the offence.

In 1983, Lynda Mann, age 15 was raped and murdered near the village of the ender by. This case was not solved. Three years later, Anather 15 years old, down Ashworth, was a victim in similar offense. Comparing the DNA "Fingerprints" derived from the semen recovered from both victims bodies the investigators realized that the same man had roped and killed both women. A 17 year old man was initially arrested and sample of his bland was subjected to the DNA analysis.

This man's innocence however was clearly established by the lack of DNA match, and was released. Subsequently, all the males in the ender b y area between 13 and 30 years of the age were asked by the police to voluntarily provide the blood samples for DNA typing.

Manoj.H.Parekh and P.Singh Parmar, Crime Investigation and Medical Science, (Allahabad Devi wedi Company), 2008 p.6

• Aarushi Talwar murder case (2013) Noida

Aarushi Talwar, the 14-year old daughter of a successful dentist couple, was found dead with her throat slit in her parents home at Jalvayu Vihar in Noida, a posh suburb of Delhi. Suspicion immediately fell on the family 's live – in man- servant. Yam Prasad Banjade alias Hemraj, a 45 year old Nepalese national, who was found missing from the home, But later on after the investigation were complete it was seen that the murder was committed by her own parents and declared as a case of honour killing.

4. DNA Profiling :

It is the commonly used forensic technique in criminal investigation DNA being as unique to an individual as

finger prints, help forensic professional identify or confirm an unidentified person, or to eliminate suspects from a list of accused. The most commonly used biological evidence for DNA profiling includes blood, saliva, semen hair, skin, urine. The evidence gained from this technique can be used in court of law while delivering judgments.

- Dr. Rajesh Talwar & anr vs CBI : 2013(82) ACC 303 :

5. Forensic Toxicology :

It involves analysis biological samples to check for the presence of toxins and drugs. This data is of prime importance in road accidents, poisoning, sexual violence, etc. The toxicology report furnish key information about the nature of substances present in any individual pertaining to an incidence. It also determines whether the quantity of substances are normal as per a therapeutic doses or exceed the permissible level.

V. CONCLUSION

Forensic in a nutshell, forensic science is that piece without which the puzzle of criminal investigation is incomplete, without the application of forensic science, criminals can never be convicted unless an eye – witness is present. While detectives and law enforcement agencies are involved in the collection of evidence, it is the forensic science that deals with the analysis of those evidence to establish facts admissible in the court of law. Also, forensic science is an advantage in conveyance of the justice without delay.

The legal system widely recognizes the sole of forensic evidence in the trial of criminal offenders. This is because when scientific techniques and methods are used, there is not much scope for bias or injustice. That is why, forensic evidence are widely accepted in courts across the world.