



# ***The significance of Forensic Evidence and the Indian Justice Delivery System***

Dr KVK Santhy<sup>\*1</sup>

## ***Abstract***

The use of science or scientific methods in the legal system and to solve crimes is known as forensic science. Crime investigators, forensic experts, forensic scientists, and examiners use forensic science procedures to analyze and authenticate evidence, suspect documents, fingerprints, digital files, and other items. In a forensic report, the findings of linked investigations are frequently described in detail. These reports are frequently used for billing, affidavits, and as evidence of what was or was not found, among other things. These reports play a crucial role in a case. The expert reports and opinions submitted to various courts in India and overseas in accordance with section 45 of the Indian Evidence Act, 1881 were highly valued, accepted, and recognized for their precision and expertise.

Study of crime scenes, evidence recovery, and examination of evidence, interpretation of findings, and presentation of conclusions or results for use in court or justice are all included in forensics.

**Keywords** - *Forensic science, Criminal Trial, Scientific Evidence, Justice*

**DOI Number:** 10.48047/nq.2016.14.4.969

**NeuroQuantology 2016; 14(4):810-815**

810

---

<sup>1</sup>Associate Professor of Criminal Law, NALSAR University of Law; santhy.nalsar@gmail.com  
eISSN 1303-5150



## Introduction

As the name goes, the Criminal Justice System deals with maintaining Peace and Harmony by providing Justice to the innocents and treating the Criminal conduct. It aids to the functioning of the Police, Courts, Prisons, etc., that work for the betterment of the people. It grants the accused certain rights, including the Right to a Fair Trial, the Right to Legal Representation, the Right against Self-Incrimination, and Protection from Torture. The Independent Judiciary assures the delivery of impartial Justice to all parties involved in a Criminal Trial. The Forensic Science, as form of Technological innovations into Law has transformed the Investigative process and the usage of Evidence in Criminal Trials. It helps in examination and analyzing evidences from crime scenes from an objective point of view for investigation and prosecution of perpetrator and also exonerates the innocents.<sup>2</sup>

Forensic, coming from the Latin word *forenses* dates back to word, Forum and the origin and the definition of the same leads to the close association with the Legal system. Forensic science is, and can be called, a “hands-on” science involving a Molecular Level analysis<sup>3</sup>. Forensic Science is that form of Life Science that meets the Law. It deals with exploration of Scientific and Physical clues gathered from the Crime scene. The account of the physical evidence becomes a valuable in a Criminal Trial for determining the innocence of the guilt. The Evidence points to the essence of the crime, the time in which it has been committed, the location; it also involves the collection, preservation and analysis of evidence suitable for the prosecution.<sup>4</sup>

---

<sup>2</sup>Jyotirmoy Adhikary, DNA Technology in Administration of Justice, (LexisNexis, Butterworths, 2007

<sup>3</sup>Shali, S. K. (2018). Applicability of Forensic Science in Criminal Justice System in India With Special Emphasis on Crime Scene Investigation. Medico-Legal Desire Media and Publications, MedicoLegal Reporter, Inaugural Issue.

<sup>4</sup>Narejo, N., & Avais, M. A. (2012). Examining the Role of Forensic Science for the Investigative-Solution of Crimes. Sindh Univ. Res. Jour.(Sci. Ser.) Vol, 44(2), 251-254.

eISSN 1303-5150

## Role of Forensic Science in Criminal Investigation

Forensic Scientist attempt to understand the process in which offence might have been committed through the prism of suspect and victim’s statements. They even recreate or try reconstructing the crime committed in order to better understand from the angle that has been missed during the manual examination. It helps in the securing fair trial to the suspect and supports the victim with collection of objective evidence relevant to the Trial. It involves the method and technology from various branches of science like Medicine, Microbiology, Pharmacy, Chemistry, Physics, and Engineering. As a discipline that operates within the confines of the legal system, Forensic Science makes a significant contribution to advancing Justice in promoting the effective collection of evidence which is relevant for Criminal Trial. The primary objective is to aid people in conducting criminal investigations by helping them identify and locate evidence at crime scenes and by giving them accurate information they can rely on to gathering, collection and processing of Evidence. The Investigations of offenses relating to Murder, Rape, Sexual Assaults, Unnatural Deaths, Poisoned Deaths, Medical Negligence, Cyber Crimes, Substance Abuse, Fire Accidents, Motor Vehicle Accidents, and Forgeries are some of the common instances Forensic Science plays a vital role in investigation<sup>5</sup>.

Forensic Science also plays a significant role in the Criminal Justice system by offering Scientifically based knowledge through the study of the physical proof, the identification of the perpetrator by personal clues such as fingerprints, footprints, blood drops or ears, cell phones or any other devices, automobiles and arms. Forensic testimony is used throughout the world both for convicting and exonerating the suspects. The forensic proof plays a vital role for the accused who are both convicted and acquitted. To more effectively detect, gather, and process

---

<sup>5</sup>Justice Jatinder N.Bhatt, ‘A profile of forensic science in juristic journey’, Supreme Court Cases Journal, Vol. 8, 2003, P.25.



evidence related to criminal conduct, law enforcement investigators must rely on new technologies and scientific advancements, as well as scientists and technicians in crime labs<sup>6</sup>.

Forensic Scientists play a pivotal role in Criminal Trials by acting in the capacity of Expert Witness which has a major influence on the Welfare of the Society. Expert Witnesses not only testifies the findings but also renders opinions based upon the results derived from the analysis of evidence that was collected from the crime scene. The Criminal Trial necessitates the appearance of Forensic Experts, who are perceived as an unbiased system for collection and usage of Evidence. In this regard, it may be noted that, DNA Profiling, a emerging form of Forensic Investigation Technique, is gaining wide spread acceptance and recognition in Courts. In *State of Madhya Pradesh v. Sitaram Gajraj Singh Rajput and others*<sup>7</sup>, a case relating to conspiracy to commit criminal breach of trust and misappropriation by preparing false muster-rolls and showing payments to fictitious persons working as labourer, the Trial Court had rejected the Finger Print Evidence and acquitted the accused. On appeal, the Madhya Pradesh High Court, referred to the different standards in determining the points of similarities between a disputed and specimen fingerprint. In addition to international standards such as that of FBI and Scotland Yard, it referred to the Fingerprint Manual of Madhya Pradesh. The Court concluded that "no hard and fast rule" can be laid out in fixing the number of points of similarities required for comparison. In the instant case, the Court emphasised on the need of enlarged photos of the disputed and specimen fingerprints and stressed on the difficulties of examining the prints with a magnifying glass. The Court also held that the Expert had not examined the general pattern of the specimen and disputed prints. In conclusion, the Court did not find fault with

the reasoning of the Trial Court and affirmed its decision.

### **Legal Framework Governing the Admissibility of various forms of Forensic Evidence in India**

Through the inspection of physical evidence, administration of tests, interpretation of results, clear and concise reporting, and accurate testimony of a forensic scientist, forensic science can establish the presence of a crime, the identity of the offender, or a relationship to the crime. It provides an explanation for the "who, what, when, where, and how" of the crime that was done. It can be utilized by the prosecution to establish the defendant's guilt beyond a reasonable doubt on the one hand, and by the defense to establish the defendant's innocence on the other. The legal restrictions must not diminish the value of forensic science in criminal investigations and court cases. What is the constitutional legitimacy of such techniques?, is one of the main queries.

To what extent is the use of forensic methods permitted by law in criminal investigations? According to Article 20(3) of the Indian Constitution, no one accused of a crime may be made to testify against themselves. The presumption that an accused person is innocent until proven guilty is the foundation of Article 20(3). Additionally, it shields the suspect from any potential torture while he is being questioned by authorities. According to criminal law, an accused person is presumed innocent unless his guilt is proven beyond a reasonable doubt. The right to be assumed innocent unless proven guilty in accordance with the law in a public trial in which he has had all the protections essential for his defense is guaranteed under Article 11 of the Universal Declaration of Human Rights. The Indian Constitution's Article 20 (3) preserves the fundamental right against self-incrimination and protects against the coercion of any witness into testifying.

This privilege was established to prevent someone from being forced to respond to a question or produce something that would increase their risk of being found guilty of a crime. What is the forensic data gathered from the experts' value as evidence?

<sup>6</sup>Peter White, Crime Scene to Court: The Essentials of Forensic Science, Second Edition

<sup>7</sup> 1978 MPLJ 197

eISSN 1303-5150



According to Section 73 of the Indian Evidence Act, 1881 the court has the authority to order anyone, including an accused person, to consent to having his finger impressions taken.

#### **Judicial Dictum on Evidentiary value of Forensic Science**

*Sushilsharma v. State of Delhi*,<sup>8</sup> was the first criminal case in India solved by the help of DNA forensics. In this case Shusil Sharma murdered his wife by firing bullets in to her body because of the misunderstanding that she had illicit relationship with her classmate and fellow congress worker Matloob Karim. After committing the sinful act he took her body in his car to the Bagiya restaurant, where he along with the manager of restaurant Keshav Kumar attempted to burn her in a tandoor there. Police recovered Sharma's revolver and blood-stained clothes and sent them to Lodhi Road forensic laboratory. They also took blood sample of Sahni's parents, Harbhajan Singh and Jaswant Kaur and sent them to Hyderabad for a DNA test. Lab reports Confirmed that the body was that of wife of Shusil Sharma, the DNA report said, "*The tests prove beyond any reasonable doubt that the charred body is that of Naina Sahni who is the biological offspring of Mr. Harbhajan Singh and Jaswant Kaur.*" And finally Mr. Shusil Sharma was found guilty with the help of forensic evidences.

In a case, where the question was, whether the DNA report could be the sole basis to establish the guilt of the accused for rape in absence of any other evidence, the Gujarat High Court in *Premjibhai Bachubhai Khasiya v. State of Gujarat and Anr*<sup>9</sup>, held that a positive DNA report can be of great significance, where there is supporting evidence, depending on the strength and quality of that evidence. However, if it is the sole piece of evidence, it cannot conclusively fix the identity. However, if the report is negative, it would conclusively exonerate the accused from the charge. The Court noted that the DNA science and report is founded on probability theory. When the profiles of

accused and foetus are consistent, it shows a probability as per Random Occurrence Ratio. That cannot be treated as conclusive proof and be the sole basis of conviction in a criminal case, especially when Random Occurrence Ratio is unavailable.

The Supreme Court in, *Santosh Kumar Singh v. State through CBI*,<sup>10</sup> case relating to Rape, relying on DNA Evidence upheld the conviction but commuted the death sentence to life imprisonment. Noting about the importance of DNA Evidence, held as follows: *a judge cannot substitute their own opinion for that of an expert, particularly in a science such as DNA profiling. Two scientists had opined that the DNA from the semen stains on the underwear of the deceased and from the swabs and slides were "from a single source and that source was the appellant". By referring to a large number of textbooks, the Trial Court gave adverse findings on the accuracy of the DNA examination and ignored the complexity and technical nature of the subject. The Trial Court was not justified in rejecting the DNA report because nothing adverse could be pointed out against the two experts who had submitted it. Therefore, the Court accepted that the DNA report was "scientifically accurate and an exact science.*

With new arising technologies in Forensic Science and with the growing demand for it, it helps investigators to find and analyse the method of investigation which they might not have been able to find through earlier methods.

#### **Issues on Admissibility of Forensic Scientific Evidence in Criminal Trial**

Law and science are inextricably linked, and this is truer still in criminal cases when forensic evidence gathered at the scene of the crime must be analyzed.

Science has always been consulted by law, and this trend is only growing. Forensic scientific evidence has been under heavy fire during the past three decades. Due to some of the ethical issues in the forensic science field, serious concerns were made of the validity of several tests used in forensic identification evidence. The difficulties that scientific

<sup>8</sup> 2007 CriLJ 4008  
<sup>9</sup>2009 CRI. LJ 288  
eISSN 1303-5150

<sup>10</sup>(2010) 9 SCC 747,



evidence in criminal prosecutions faces can be roughly categorized under four primary headings: system or control issues, accuracy issues, honesty issues, and lawyer competence issues. In addition to these issues, the trial judges must also contend with the expert witness's potential prejudice or conflicts of interest while evaluating the forensic scientific evidence.

Evaluating the many facets of evidence that have an impact on science or technology is a challenging undertaking for the judge. Within a short period of time, the criminal court system was inundated with scientific expert testimony. The norms that must be upheld for a proper assessment of the scientific evidence presented to a court of law are actually unknown to the judges.

Almost all scientific and technological advancements have an immediate impact on the criminal trial, which is concerned with the process of discovering the truth. The question of who will assess the cutting-edge scientific evidence—the court or the scientific community—has discouraged legal scholars for the past thirty years. The conventional truth-finding function of the judges would be directly impacted if the task was entirely delegated to the scientific community. However, it is not expected that the judges will behave like amateur scientists. When judging scientific expert testimony to be admitted during a trial, there should be consistency among the judges. The trial judges are tasked with the responsibility of not only evaluating the relevance of an expert's evidence but also fixing its reliability by acting as true "gatekeepers" based on admission requirements. It is crucial to note that unlike other jurisdictions, India has no set standard for analyzing scientific evidence in criminal proceedings that has been established by legislation or by Supreme Court recommendations.

### **Conclusion**

The Evidence forms the building blocks of the Investigative process and for the final product to be built properly, Evidence must be recognized, collected, documented, protected, validated, analysed, disclosed, and presented in a manner which is acceptable to

the court. How, a puzzle is incomplete with a missing piece, the same way Criminal Investigations are incomplete without Forensic Science. In order to establish or ascertain the facts admissible in the Court of Law, analysis of the Evidence collected is accomplished with the help of Forensic Science.

Justice is a rudiment for Humanity growing around cultures, civilisations and Legal systems. In India, a number of criminals, who were wrongfully convicted, have now been acquitted with the help of Forensic Science, itself to be the "need of the hour platform" for Criminal Justice System. Using forensic science to gather evidence is primarily important for ensuring that justice is done fairly.

This is done so that the guilty party, not the innocent one, should be punished for the actual offense. Through the use of clue materials, scientific evidence can connect the offender with the crime. The perpetrator at the crime scene either leaves clues there, on the victim or on the numerous items there, or he takes clues directly from them. If the items used as clues are correctly gathered, stored, sent, appraised, and their identity, integrity, and validity are still undisputed. The number of homicide investigators is rising, but not at the same rate as crime.

As a result, the investigator is unable to devote enough time to a case to find, gather, preserve, and have the clue materials adequately examined. As a result, important data is lost. In numerous instances, forensic evidence has been useful in locating the true offender, who is then punished by the court. The forensic evidence is worth more than the other types of evidence presented in court. Although it happens very seldom, sometimes the evidence has significant problems. More specialists should be honoured since they consistently provide knowledge and pertinent evidence about the issue, which enables the case to be resolved on that foundation. By expanding forensic science, the nation can see more growth. This could establish rigid guidelines for punishing the accused.

Furthermore, the academic course curricula must be designed in a way that facilitates an



inter-disciplinary approach to learning fine points of forensic sciences by legal practitioners and the judiciary on the one hand and legal knowledge to forensic experts on the other. Periodic in-service training must also be held.

Investigators have been waiting patiently for periodic training in scientific techniques. To develop broader use of forensics in the legal system, public awareness of issues like protecting the integrity of crime scenes must be raised. The government must prioritize improving forensic facilities, and the annual budget for police modernization must allocate funds for raising investigation standards'

technological level. In fact, forensic law needs to be strengthened so that the Indian court system can use scientific tools for investigation.

The aim of Criminal Justice System is to ensure calibre of conduct, unbiased Justice, Protection of Individuals and with the advent of Forensic techniques, which secures all the above, it has become the Legitimate associate of Law in serving Justice to one and all. Forensic Science and its application in Criminal Trials secures more legality and authenticity for investigative procedures and the evidences collected therein in a Criminal Trials.

