



## Principles Governing Admissibility Of Forensic Evidence-A Critical Study

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<b>Abstract</b>	
<b>CC License</b> CC-BY-NC-SA 4.0	This research paper is analyses some of the key principles that govern admissibility of forensic evidence. These principles are analysed doctrinally in the light of various judgements and statutory provisions. The research paper highlights that admissibility of forensic evidence is governed by principles of natural justice, should be legally valid and not violate constitutional and legal rights of its subject. The research paper signifies importance of collection, preservation, handling and testing of forensic evidence through case analysis along with its corroboration. Additionally, the paper highlights significance of experience of the forensic expert and reliability of the forensic tests.

### MAIN BODY

*".....Forensic science is not just a science, it is an art; it requires skill, expertise, and a commitment to finding the truth....."*

*Justice Krishna Iyer*

### I -Introduction

The forensic science is an aid to courts in India to carry out fair trial and come to just conclusion about the events that led to a crime. It helps elaborate events, that occurred prior, during and post of the crime. Often evidence obtained through forensic sciences have helped the courts in identifying the motives of the criminal. In **State of U.P. v. Ashok Kumar Srivastava**<sup>1</sup> the trial court with forensic sciences, was able to establish that the accused had caused death to his wife and mother-in-law owing to his extra-marital affairs by strangulation. The Supreme Court had upheld his conviction in the case. Similarly, in **State of H.P. v. Gian Chand**<sup>2</sup> the prosecution agencies used forensic evidence to establish that the accused murdered his wife owing to illicit relationship with other woman by poisoning. The agencies undertook viscera analysis from viscera samples (stomach, small intestines, kidney, liver, spleen and heart etc) and carried out chemicals analysis which confirmed presence of Aluminium Phosphide. Analysis of the blood samples also confirmed presence of Aluminium Phosphide. Agencies further carried out forensic examination of the crime scene and seized various samples including pesticide which were used to commit the crime by the accused. There are many ways various fields of forensic sciences are employed to link perpetrators to the crime scene.

Forensic sciences are used in examination of physical evidence such as DNA, fingerprints, body fluid stains, blood stains, hair samples etc collected from the crime scene to identify accused or the victim and link them to

<sup>1</sup> State of U.P. v. Ashok Kumar Srivastava (1992) 2 SCC 86

<sup>2</sup> State of H.P. v. Gian Chand (2001) 6 SCC 71

crime. Similarly Digital Forensics employs variety of software tools on digital devices such as laptops, mobiles, storage devices, personal computers, etc to uncover evidence from them. Ballistic Analysis involves inspection and analysis of firearms, bullets and explosives by the experts to match them with samples obtained from crime scene and link them to the perpetrators. The Forensic Psychology provides mental state of the perpetrators of the crime or of the victims, it helps in identifying pattern or motive, it is also used to test the credibility of the witness. Further the document examination using forensics helps analyse factors such as truthfulness of signature, fingerprints, marks, originality of document, handwriting etc of the document.

## **II- Relevance of proper evidence**

A large number of cases are pending before Indian Courts at evidence stage of the trial. As per the data available on National Judicial Data Grid, among the total pending cases before the Indian courts approximately 53 percent of the cases i.e. 7,503,654 are held up at evidence stage. Out these, 5,812,175 are criminal cases and 923,584 are civil cases<sup>3</sup>. Evidence stage is crucial to outcome of trial of a case as it helps the court in determining the truthfulness of the facts presented by parties to the case. The evidence stage may be considered as the backbone to fair trial and ensuring justice. It helps identifying rights of a party in a civil case and identify an accused in a criminal case. The evidence helps the court to thrash our right from wrong, distinguish facts from fiction or conjecture in a case. The judgements based on evidence are cornerstone of justice and credible, else they would be product of biased speculation. The justice also demands that accused must be given fair hearing and proportional punishment to crime, and he must be protected from wrongful conviction. Evidence therefore plays important role in identifying guilt from innocence beyond reasonable doubt. The evidence is required to prove level of involvement and nature of crime participated in. It plays crucial role in conviction and acquittal.

## **III-Admissibility of Forensic Evidence**

Identifying factors that affect admissibility of evidence deserves highest priority and focus of judicio-legal mind. The evidence must prove facts in issue and relevant facts. The evidence collected must be admissible in the courts of law and in accordance with well-established principles and as per rule of law, it must be able to prove facts beyond reasonable doubts. Thus, evidence must be legally obtained and from reliable and relevant sources. A Judge is bound to ignore evidence in which probative value is less and has high chances of misleading the case. When the evidence is unfairly prejudiced, causing unnecessary confusion and delay it is likely to be held low on merits by the courts.

For forensic evidence to be admissible in court, and to be considered robust and reliable for courts to place their judgements, it is important that procedures surrounding the collection, preservation and testing of forensic samples are correct and as per established protocols. The forensic experts handling the sample and undertaking the test are qualified enough, have adequate experience and have integrity. It is important that Forensic expert carries out necessary preliminary test, he should further follow standard procedures like labelling, sealing and preserving the samples. It is also important that forensic evidence should have probative value. That the prosecution should be able to establish chain of custody and integrity of evidence. When any forensic sample is collected and subjected to chemical analysis, care must be taken from the stage of extraction of sample, to handling, preservation and analysis that the sample is not contaminated, also scientific protocols and principles are followed. Often the courts have emphasised on the morality of the fact that needs to be proved using medical or forensic methods to decide the admissibility of test, questions like paternity of child, or two-finger test in Rape case fall under these categories. The documentation and quality control of the forensic procedures ensures reliability of the test and prevents deviation. These test results need to be analysed and presented to the court in a reliable manner as well.

## **IV-Scientific test must verify ‘facts in issue’ or ‘relevant facts’**

One of the important grounds affecting admissibility of forensic evidence is that the evidence should be pertaining to the facts in issue or relevant facts. In other words, the forensic or scientific evidence obtained must be able to provide information about the matter being presided by the court and contribute positively to it. The DNA, bloodstain, or stain of body fluid at the scene of crime of murder may be relevant in determining the presence of an accused. Similarly, if the scientific test is unlikely to assist in obtaining any material relevant

<sup>3</sup> Pending Dashboard, National Judicial Data Grid, available at: [https://njdg.ecourts.gov.in/njdgnew/?p=main/pend\\_dashboard](https://njdg.ecourts.gov.in/njdgnew/?p=main/pend_dashboard), (last visited on 23 Feb 2023)  
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to investigation of relevant facts or facts in issue the same may be discarded by the court as inadmissible. In the view of the above it is imperative that the term 'facts', 'facts in issue' and 'relevant facts' are understood in right context. The Section 3 Interpretation clause of the Indian Evidence Act, 1872<sup>4</sup> defines: -

“.... *Fact: means and includes: -*

(1) *Anything, state of things or relation of things, capable of being perceived by senses.*

(2) *Any mental condition of which any person is conscious.....”*

“.....*Relevant: One fact is said to be relevant to another when the one is connected with the other in any of the ways referred to in the provisions of this Act relating to relevancy of facts....”*

“...*Facts in issue: The expression 'facts in issue' means and includes any fact from which, either by itself or in connection with other facts, the existence, non-existence, nature or extent of any right, liability, or disability, asserted or denied in any suit or proceeding, necessarily follows....”*

In the **State of Jharkhand V. Shailendra Kumar Rai@ Pandav Rai**<sup>5</sup> the Supreme court held that the two-finger test conducted by the medical board to determine whether victim to alleged Rape and Sexual assault is habituated to sexual intercourse should not be conducted, that the same has no scientific basis or role in determining the rape or offence under section 375 of the I.P.C<sup>6</sup>.

### V-The scientific tests must have legal validity

For the scientific evidence to be produced before court for admission, it must be legally valid and tenable. Also, the scientific procedures for examination must be reliable and accurate, which could be easily verified. This requires forensic-scientific test to be done in accordance with established protocols. In the case of **Smt. Selvi and others v. State of Karnataka**<sup>7</sup> a batch of criminal appeals before the Hon'ble Supreme Court raised questions pertaining to legal validity and admissibility of evidence obtained from involuntary administration of certain scientific techniques such as polygraph examination, narcoanalysis, Brain Electrical Activation Profile (BEAP) test for assisting state agencies in investigation.

The court held that compulsory administration of the impugned techniques violates fundamental rights of the subject specially violating right against self-incrimination under Article 20(3) of the Constitution of India. The Supreme Court further held that using such techniques violated “substantive due processes” for violation of personal liberty as the test result could expose person to variety of adverse consequences of non-penal nature. These techniques are intrusion to mental privacy and affects right to fair trial. The guidelines published by National Human Rights Commission 2000 must be strictly adhered to, and Lie-detector test should not be administered except on the basis of consent of the accused, with consequences clearly explained both by police and his lawyer.

### VI- Forensic test to be done as per established protocols

That in **State of Uttar Pradesh V. Satish**<sup>8</sup> the Apex court held that for forensic evidence has to be admissible and reliable. The court further held that for the forensic evidence to be admissible it must be ensured that the forensic experts follow proper protocols, as well as procedure. The case arose from appeal filed in the Supreme Court against Allahabad High Court Judgement, which had upheld the Trial court judgement, acquitting the accused of charges of murder under section 302 of Indian Penal Code<sup>9</sup>. The prosecution's case was that accused had strangled his wife and tried to burn her to destroy the evidence. The prosecution submitted report of chemical examiner as forensic evidence to prove presence of kerosene in the victim's body along with testimonies of many witnesses was taken. The Supreme Court agreed with the High Court and Trial Court verdict stating that forensic evidence submitted by the prosecution had not been obtained through proper procedures and is unreliable. Therefore, court held that chemical examiner's report does not inspire confidence as per established procedures. The Chemical examiner had failed to follow prescribed protocol for extraction, testing and identification of petroleum product found on the body. The chemical examiner had further failed to undertake preliminary test to eliminate possibility of contamination. The Apex Court further remarked that the forensic tests were not as per established procedures, and adequate protection preventing contamination of

<sup>4</sup> Indian Evidence Act, 1872 (Act no. 1 of Parliament of India, 1872)

<sup>5</sup> State of Jharkhand V. Shailendra Kumar Rai@ Pandav Rai (2022)AIR(SC) 5393

<sup>6</sup> Indian Penal Code, 1860 (Act No. 45 of Parliament of India, 1860)

<sup>7</sup> Smt. Selvi and others v. State of Karnataka(2010) 2AICLR 605

<sup>8</sup> State of Uttar Pradesh v. Satish, (2005) 3 SCC 114

<sup>9</sup> Supra 6

samples were not taken. The court further opined that qualification, integrity and experience of forensic expert are pre-requisite to establish reliability and admissibility of forensic evidence.

### VII-Qualification relevant for forensic expert.

The usefulness of a forensic expert is his ability to give useful evidence for matter being addressed before the court. The Forensic Expert must always qualify himself by including in his opening statement information about his educational qualification, years of experience, training and publications. The basic principle is that the forensic expert must have reliable knowledge and skill to conduct the forensic test. In the case of **Najib Singh V. State of Punjab**<sup>10</sup> when the medical issue pertaining to X-Ray report of skull injury were argued. The testimony of the doctor was challenged by the counsel, who relied on Modi's Medical Jurisprudence. It was held by the court that the doctor only had 11 months of his own experience and no special training or education in radiology, and could not be regarded as an expert under section 45 of The Indian Evidence Act, 1872.

### VIII- Corroborated forensic evidence is admissible

Often the Indian judicial system has expressed the need for forensic evidence to be corroborated with other form of evidence specially when there is a conflict or contradictory reporting of facts. The Hon'ble Supreme Court in the case of **Solanki Chimanbhai Ukabhai V. State of Gujrat**<sup>11</sup> relied on medical evidence as it was supported by ocular evidence denying 'minor inconsistencies' arguments given by defence and held as following:-

*"...Ordinarily, the value of medical evidence is only corroborative. It proves that the injuries could have been caused in the manner alleged and nothing more. The use which the defence can make of the medical evidence is to prove that the injuries could not possibly have been caused in the manner alleged can thereby discredit the eye-witnesses. Unless, however, the medical evidence in its turn goes so far that it completely rules out all possibilities, whatsoever of injuries taking place in the manner alleged by the eye-witnesses, the testimonies of the eye-witnesses cannot be thrown out on the ground of alleged inconsistencies between it and medical evidence....."*

### IX-Doctrine of virtue of subsequent event

The Indian Courts have often upheld the doctrine of virtue of subsequent event, wherein if during the course of investigation, when the accused is arrested and a fact is discovered which has a direct bearing with crime and provides information on the crime, such fact or information will be considered true and admissible evidence. This additionally has to be corroborated by other evidence if required. In **State of Maharashtra v. Damu Shinde**<sup>12</sup> The Apex Court upheld the principle of integrity of evidence and its chain of custody in this case. The court deliberated on the probative value of the evidence under section 27 of the Indian Evidence Act<sup>13</sup> under '*doctrine of virtue of subsequent event*'. The court upheld the principle that if any fact is discovered under the process of investigation being undertaken on the information obtained from an accused or arrested person, such discovery is a confirmation that the information supplied by the accused or arrested person is correct and admissible as evidence. As per the facts of the case the accused had murdered three children from neighbourhood under the advice of occult practitioner 'guruji' to uncover hidden treasure from land. The accused confessed before the judicial magistrate of the gruesome way of committing the murder. The nature of confession, and long prior period of arrest created reasonable doubts regarding coercion and absence of freedom to extract confession. The court opined that confession alone cannot be basis of convicting, and there must be corroborating evidence. As for the facts of the case, for the purpose of occult practice, the accused Balu Joshi had kidnapped the three children, mutilated their genital organ and killed them after collecting their blood. The accused disposed of the body in nearby canal thereafter. Further, the discovery of the body based on the confession and its autopsy thereafter on the recovered body, revealed that the penis of the child was cut-off and the corpse had injury to the skull for occult ritual. This corroborated the facts with confession made by the accused to convict them. Additionally, from the scene of crime broken piece of glass was found, which was

<sup>10</sup> Najib Singh V. State of Punjab, 1987 S.C. Cr. R. 25 at p.27

<sup>11</sup> Solanki Chimanbhai Ukabhai V. State of Gujrat A.I.R. 1983 S.C. 484

<sup>12</sup> State of Maharashtra v. Damu (2000) 6 SCC 269

<sup>13</sup> Supra 4



part of tail lamp of a bike found from the house of one of the accused guruji -an occult practitioner confirming *doctrine of confirmation of subsequent event* as embedded in section 21 of the Evidence Act. Additionally, from the accused Balu Joshi's home a list of herbs to be procured for occult ceremony was recovered which was confirmed by handwriting expert to be that of another accused Mukinda Thorat in its report, but the report was inadmissible as the expert could not be cross-examined. The accused were punished with life imprisonment for murder u/s 302 by the Supreme Court.

The '**doctrine of confirmation of subsequent event**' was also emphasised by Privy Council in **Pulukuri Kottaya v. Emperor**<sup>14</sup> in which it was held that "...*place from which the object was produced, the knowledge of the accused as to it, but the information given must relate distinctly to that effect....*".

## X- Scientific evidence affecting rights of third party are inadmissible

Often the Indian courts seems to exercise extreme restraint and caution in evaluating forensic and scientific evidence, when the fact(s), though relevant to the case have aspects of social morality associated with it. The DNA test, though necessary to establish paternity of a child born out of adulterous relationship in a matrimonial dispute is often looked down upon by the courts, and the courts reluctantly order such test, primarily because the child is not party to the dispute. In **Aparna Ajinkya Firodia v Ajinkya Arun Firodia**<sup>15</sup> the division bench of the Supreme Court comprising B.V. Nagarathna and V. Ramasubbramanian. The respondent-husband had alleged adultery on wife in a matrimonial case and had filed application before the Hon'ble family court to subject his second child master Arjun Singh to deoxyribonucleic acid test (DNA test) to ascertain the paternity of the child. The child was born during the subsistence of the marriage. The respondent-husband had discovered adultery of his wife while checking her phone, on being confronted she admitted to her adulterous past. The respondent-husband, thereafter obtained DNA test of the second child from a private lab which confirmed absence of genetic markers of respondent as father, confirming adultery of the child. To prove his case the husband filed an application for DNA test in the court. The application was allowed by the family court and allowed by the High Court as well. But turned down by the Hon'ble Supreme Court. The Hon'ble Supreme Court held the following: -

"...34. *It is contended by Mr. Kapil Sibal, learned senior counsel for the respondent that after all the endeavour of every court should be to find truth and that every party to a litigation is entitled to produce the best evidence. Enabling the party to produce the best evidence, is part and parcel of right to fair trial. Therefore, it is contended by learned senior counsel that the refusal to subject the child to DNA test would infringe upon the respondent right to fair trial. To buttress the contention that the right to privacy of an individual must yield to the right to fair trial of another, reliance is placed upon the decision of this court in Sahara India Real Estate Corporation Limited & Ors. Vs. Securities and Exchange Board of India &Anr., (2012) 10 SCC 603.*

35. *Attractive as it may seem at first blush, the said argument does not carry any legal weight. The lis in these cases is between the parties to a marriage. The lis is not between one of the parties to the marriage and the child whose paternity is questioned. To enable one of the parties to the marriage to have the benefit of fair trial, the court cannot sacrifice the rights and best interest of a third party to the lis, namely child.*

36. *Therefore, I concur wholeheartedly with my learned sister that the Family Court as well as the High Court were wrong in allowing the application of the respondent for subjecting the child to DNA test. Therefore, the appeal deserves to be allowed and accordingly it is allowed. However, this shall not preclude the respondent-husband from leading any other evidence to establish the allegations made by him against the appellant in the petition for divorce.....*".

## XI-Conclusion

The admissibility of forensic evidence is governed by principles of natural justice. The scientific evidence should be legally valid and should not violate constitutional and legal rights of its subject. It is important that special emphasis is given to collection, preservation, handling and testing of forensic evidence. The scientific test applied on the forensic evidence must be reliable and verifiable. This can only happen when the forensic and scientific test are done as per well defined and established protocol. The education, training, experience of the forensic expert weighs on the admissibility and reliability of the forensic tests. Often it is seen that more than one evidence is required for corroboration. Also, a live witness to the event is given more credibility over scientific analysis of evidence collected.

<sup>14</sup> Pulukuri Kottaya v. Emperor AIR 1947 PC 67 : 74 IA 65

<sup>15</sup> Aparna Ajinkya Firodia v Ajinkya Arun Firodia SLP(C)No. 9855 of 2022

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ABBREVIATION	MEANING/ EXPANSION
@	Alias
A.I.R.	All India Reporter
A.I.R.-S.C.	All India Reporter (Supreme Court)
AICLR	All India Commercial Law Review
Anr.	Another
Cr.P.C.	The Code of Criminal Procedure, 1973
C.P.C.	The Civil Procedure Code 1908
DNA	De Oxyribonucleic acid
GoI	Government of India
IEA	Indian Evidence Act, 1872
I.P.C.	The Indian Penal Code, 1860
Ors	Others
SCC	Supreme Court Cases
S.C.Cr.R.	Supreme Court Criminal Ruling
S.L.P.(C)	Special Leave petition
Sec, s	section
V.	Versus
Vs	Versus