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## Need for a Consolidated Law on Forensic Science in India

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### ABSTRACT:

Forensic Science is a multidisciplinary subject that borrows from disciplines as diverse as Physics, Chemistry, Biology, Computer Science, Psychology, and Phonetics. Through a combination of scientific applications, Forensic Scientists aspire to find methods and solutions for recovery and collection of evidence from crime scenes to extract prosecutable evidence that will link the evidence to the location of the crime and finally to the criminal so that they may be successfully prosecuted<sup>1</sup>. In *Dharam Deo Yadav v. the State of U.P.*<sup>2</sup>, the Supreme Court in India has emphasized the need to adopt scientific methods in crime detection to save the judicial system from low conviction rates. The court also opined on the need to strengthen forensic science for crime detection. However, in India, there is no concrete law to govern issues of admissibility of forensic techniques. Some sections, i.e., *Sections 53, 54, 53(A), 164(A) of the Code of Criminal procedure*, govern science and technology issues to a certain extent but not in detail<sup>3</sup>. Because of the absence of laws, there have been many ambiguities. For example, debates on the admissibility of electronic evidence, whether courts can order paternity tests in matrimonial disputes, the validity of two-finger tests performed in Rape cases, etc. Even though courts are present to adjudicate on this issue, a person's life and liberty can be deprived unfairly because of different interpretations, for ex: Lie detector tests were being used across the country until the Supreme Court declared them unconstitutional. Hence, this paper will explore judgments (which deal with a branch of forensic sciences such as forensic documentation, forensic ballistics, DNA profiling, cyber forensics, etc.) to highlight the need for uniform Forensic laws. Further, this paper will provide suggestions to frame regulations to clarify the admissibility of the forensic evidence and ensure that evidence collection doesn't violate the fundamental rights of the accused or the victim by referring to the

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<sup>1</sup> Ellie gelardy, "Investigating Forensic Science"<https://thevigornia.com/1389/features/investigating-forensic-science/>, DOI: 13.08.21

<sup>2</sup> (2014) 5 SCC 509

<sup>3</sup> South Asian Law Review, Admissibility Of DNA In Indian Legal System, Mar 14, 2019, <https://thelawbrigade.com/criminal-law/admissibility-of-dna-in-indian-legal-system/>, DOI: 10.08.21

**271st Law commission report on Human DNA Profiling<sup>4</sup>, Malimath Committee report on Reforms of the Criminal Justice System<sup>5</sup>, AP Shah Committee report on Data privacy<sup>6</sup>, international laws, and domestic laws of other countries such as the U.K., USA, etc.**

**KEYWORDS:** Forensic Science, criminal justice system, data privacy, fundamental rights, reforms

## **INTRODUCTION**

In India, provisions that legally introduce the application of forensic sciences to solve and judge cases are contained in the Crpc and Indian evidence act these are:

**Section 9<sup>7</sup> Of the Indian Evidence Act, 1872** deals with facts necessary to explain or introduce a fact in issue or relevant fact".

**Section 45<sup>8</sup> of the Indian Evidence Act** provides how the court can form an opinion upon foreign law, science or art or identity of handwriting [or finger impressions], etc.

**Section 51<sup>9</sup>** refers to grounds when opinion becomes relevant. An expert's opinion based on DNA profiling is also applicable in Section 46 as it deals with "facts bearing upon opinions of experts."

**Section 112<sup>10</sup> provides** that birth during the continuance of a valid marriage is conclusive proof of legitimacy, with the only exception that the parents had no access to each other during the period of conception.

Further, **Section 53-A<sup>11</sup>** was inserted vide the Code of Criminal Procedure (Amendment) Act, which provides that an accused of rape can be examined by a medical practitioner, including collecting bodily substances from the accused of DNA profiling. **Section 53<sup>12</sup>** authorizes the police

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4 Law Commission of India, 271th Report on Human DNA Profiling – A draft Bill for the Use and Regulation of DNA-Based Technology, July 2017

5 Malimath Committee Report on Reform of Criminal Justice System, 2003

6 "Report of the expert's group on privacy" (Chaired by Justice AP Shah, former chief justice, Delhi High Court), submitted to the Planning Commission on 16 October 2012

7 The Indian Evidence Act, 1872, § 9

8 The Indian Evidence Act, 1872, § 45

9 The Indian Evidence Act, 1872, § 51

10 The Indian Evidence Act, 1872, § 112

11 The Code of Criminal Procedure (Amendment) Act, §53-A

12 The Code of Criminal Procedure (Amendment) Act, § 53

officials to get a medical examination of an arrested person done during an investigation by a registered medical practitioner.

**Section 311-A<sup>13</sup> of Crpc** was also added to empower the Magistrate to order a person to give specimen signatures or handwriting. **Section 293<sup>14</sup>** of the Code of Criminal Procedure provides that the report of scientific experts may be used as evidence in any inquiry, trial, or other proceedings of the court.

Along with the provisos mentioned above time and again, the courts have also emphasized the critical role played by forensic sciences. However, there are many inadequacies in applying forensic sciences in our criminal justice system due to

1. Different interpretations are taken by courts while determining the value of the evidence obtained using forensic sciences
2. Difference of opinion by courts on weight to be placed on forensic experts
3. Erroneous techniques used by police in collecting evidence. Ultimately this may cause unfair acquittals or convictions.

Thus, this paper will first establish a need for uniform forensic laws and later provide suggestions to frame regulations to clarify the admissibility of the forensic evidence.

### **RESEARCH QUESTIONS:**

1. The paper seeks to establish and justify why there is an urgent need for enacting uniform laws on forensic science by exploring various judgments by Indian courts dealing with different branches of forensic science.
2. Secondly, the paper will provide suggestions to frame the laws concerning the collection and admissibility of forensic evidence in a way that does not violate the fundamental rights of citizens.

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<sup>13</sup> The Code of Criminal Procedure (Amendment) Act, §311-A

<sup>14</sup> The Code of Criminal Procedure (Amendment) Act, § 293

## ANALYSIS

### a. ELECTRONIC EVIDENCE AND THEIR ADMISSIBILITY

Cyber Forensics is the science of collecting, analyzing, and examining digital evidence essential for preventing cybercrimes from occurring repeatedly. The importance of cyber forensics was highlighted by the Supreme Court in **Tomaso Bruno and Anr. V. the State of Uttar Pradesh**<sup>15</sup>, where it observed advancement of information technology and scientific temper must pervade the method of investigation as scientific and electronic evidence can be a great help to an investigating agency, s is electronic evidence relevant to establish facts. Let's us look at a few conflicting judgments on the admissibility of electronic evidence

**IN Anwar P V. v. P. K. Basheer and Others**<sup>16</sup>, the court held that the only option to prove the electronic record/evidence is by producing the original electronic media as Primary Evidence court or its copy, by the way, secondary evidence U/s 65A/65B of Evidence Act. *Thus, in the case of CDs, DVDs, Memory Cards, etc., containing secondary evidence, the same has to be accompanied by the certificate in terms of Section 65B obtained at the time of taking the document, without which the secondary evidence about that electronic record, is inadmissible.*

However, in **Shafi Mohammad vs. State of Himachal Pradesh**<sup>17</sup>, The Apex Court observed that- Electronic evidence which is admissible under Section 65A and 65B is clarificatory and procedural and cannot be held to be a complete code on the subject. A party who is not in possession of the device from which the document is produced cannot be required to produce a certificate under Section 65B (4) of the Act. Thus, *the requirement of a certificate under Section 65B is not always mandatory.*

There is no clarity on whether the court can direct the accused to give a voice sample as in **Sudhir Chaudhary & Ors. v. State (NCT of Delhi)**<sup>18</sup>, the Supreme Court held that an accused could be directed to give a voice sample as it was not the testimony, but rather it constituted identification

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15 (2015) 7 SCC 178

16 (2014) 10 SCC 473

17 Criminal Appellate Jurisdiction SLP(Cr)No 2302 of 2017

18 (2016) 8 SCC 307

data. But the Gujarat High Court, in **Natwarlal Amarshibhai Devani v. State of Gujarat & Ors**<sup>19</sup>, the court took a contrary view observing that in the absence of any provision enabling the Magistrate to order Voice Spectrographic Tests, the court was not competent to direct an accused to give the voice sample. In **Ritesh Sinha v. the State of U.P**<sup>20</sup> Hon'ble Justice Aftab Alam observed: There are, indeed, precedents where the court by the interpretative process has evolved old laws to meet contemporary challenges and has planted into them contents to deal with the demands and the needs of the present that could not be envisaged at the time of the making of the law. On compelling the accused to give a voice sample, the law must come from the legislature, not through the court process. However, it is to be noted that the matter is pending consideration before the larger bench due to the difference of opinion on the bench.'

### **ADMISSIBILITY OF POST MORTEM REPORT**

Here the courts have expressed contrary views as some convictions have been based solely on post-mortem reports. At the same time, in other cases, more emphasis was given to the doctor's opinion rather than the report, e.g., in **the State of Himachal v. Jai Chand**<sup>21</sup> where it was held "the document by itself is not substantive evidence. Still, it is the doctor's statement in court, which has the credibility of substantive evidence and not the post-mortem report, which in normal circumstances ought to be used only for refreshing the memory of the doctor's witness or to contradict whatever he might say from the witness box. But in **Kehar Singh vs. State (Delhi Administration)**<sup>22</sup> The application of post mortem report was discussed and exemplified in the celebrated murder case of Smt. Indira Gandhi, late Prime Minister of India. The main observation was that the post-mortem report is still reliable even if no x-ray was done.

### **b. ADMISSIBILITY OF TOXICOLOGY REPORT**

Forensic toxicology applies analytical chemistry to the purposes of the law. It includes analyzing a variety of fluids and tissue samples to determine the absence or presence of drugs and poisons.

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<sup>19</sup> AIR 1980 SC 593

<sup>20</sup> (2013) 2 SCC 357

<sup>21</sup> Cri appeal no.269 of 2007 decided on 3 July,2013

<sup>22</sup> AIR 1988 SC 1883

Once the analytical component is complete, the toxicologist has the equally challenging aspects of interpreting the findings. Even though toxicology reports can be effectively used in the investigation, there is no clarity on their admissibility as in **Bhupender Singh vs. the State of Punjab**<sup>23</sup>, the court held that

(1) No hard and fast rule can be laid down regarding the value attached to the chemical examiner's report.

(2) The chemical examiner does not, as a rule, give an opinion as to the cause of death but merely reports on the chemical examination. The report itself is not crucial.

### **c. ADMISSIBILITY OF PATERNITY TESTS**

In **Sharda v. Dharampal**<sup>24</sup>, the court held that “A matrimonial court has the power to order a person to undergo a medical test. Passing such an order by the court would not violate the right to personal liberty or the right to privacy under Art.21 of the Constitution. The courts later declared that ordering routine paternity tests should not be done routinely<sup>25</sup>. If such tests can label a child as an illegitimate child, such a test must be avoided and conducted only after careful consideration. However, such observations of the court go unnoticed, as in cases of divorce proceeding before a matrimonial court, the court can order an individual to submit himself to medical examination, and if the party refuses it can draw an adverse inference<sup>26</sup>.”

### **d. LACUNA IN INVESTIGATION**

In **Manohar Lal Sharma v. Union of India**<sup>27</sup>. It was observed that “fairness in the investigation is a precursor to a fair trial. Scientific aids, especially forensic tools, enhance transparency, fidelity, and accuracy to brace fairness in the administration of justice. The aim of the investigation is

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<sup>23</sup> 1988 AIR 1011

<sup>24</sup> AIR 2003SC 3450

<sup>25</sup> Kanti Devi v. Poshi Ram, AIR 2001 SC 2226

<sup>26</sup> AIR 2003SC 3450

<sup>27</sup> (2014) 2SCC 532

ultimately to search for truth and to bring offenders before the law". But the problem that persists is that because of the lack of training given to police officers in collecting evidence and the lack of application of forensic science in criminal investigation<sup>28</sup>, the credibility of the evidence is doubted by the courts. Let us look at a few cases to establish this:

**In the State of Gujrat vs. Kishanbhai<sup>29</sup>:** this case involved the rape and murder of 6 years old child. The trial court, High Court and Supreme Court had to provide the benefit of the doubt to the accused due to severe lapses in the investigation. Additionally, DNA profiling of the blood found on the knife used in the commission of the crime (which the accused-respondent, Kishanbhai, had allegedly stolen from Dinesh Karshanbhai Thakore PW6) would have uncontrovertibly determined whether or not the said knife had been used for severing the legs of the victim Gomi, for removing her anklets. Despite so much advancement in forensic science, the investigating agency seriously erred in carrying out an effective investigation to determine the guilt of the accused Kishanbhai genuinely.

**In-State of Rajasthan vs. Jainudeen Sheikh<sup>30</sup>** An intoxicant material was found in the accused's possession without any license. An FIR was registered under NDPS Act. There was a delay in obtaining the report from the Forensic Science Laboratory about the contraband article. The court held the custody of the accused illegal and granted compensation.

**Observation-** the State Government has not established Forensic Science Laboratories despite the orders passed by this court; there has been a delay in getting the seized articles tested.

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<sup>28</sup> The present level of application of forensic science in crime investigation is somewhat low in the country, with only 5-6% of the registered crime cases being referred to the FSLs and Finger Print Bureau put together. There is an urgent need to bring about a quantum improvement in the situation, more so when the conviction rate is consistently falling over the years in the country and the forensic evidence, being clinching in nature, can reverse the trend to some extent. Malimath Committee Report on Reform of Criminal Justice System, 2003

<sup>29</sup> (2014) 5 SCC108

<sup>30</sup> (2016) 1 SCC 514



**In Mohan Singh vs. the State of Punjab**<sup>31</sup>, the police had not produced a credible ballistic expert; hence the court disregarded expert opinion stating that *"Most of the expert's answers are not categorical. He did not have an opportunity of seeing the injuries and exit wounds of the shots himself. He mainly was giving his answers based on observations made by others and measurements noted by them. A slight difference in the sizes one way or the other might make all the difference to the result. The court thinks it would be unsafe to place implicit reliance on the expert's evidence for the reasons we have already given.*

#### **e. CONCLUSION AND SUGGESTIONS**

It has now been established that courts have taken different views regarding the admissibility of evidence which are procured by forensic sciences such as cyber forensics, DNA testing, forensic ballistics, forensic toxicology, etc. Further errors in collecting evidence by police, and a low rate of application of forensic science in criminal cases, have caused irreparable harm to the fundamental rights of the citizens and as well to the criminal justice system of the country. The only possible remedy to this situation will be to enact legislation dealing with all branches of forensic sciences by adopting the following recommendations;

**1. Implementation of The DNA based technology (use and regulation) bill, 2017**<sup>32</sup> which aims to provide for the use and regulation of Deoxyribonucleic Acid (DNA) based technology; taking of specified bodily samples from specific categories of persons for DNA analysis, custody trail from collection to reporting; to provide for the use of DNA profiles in the investigation of crime and the use of such shapes in proving the innocence or guilt of persons; to establish and regulate the administration of the DNA Profiling Board; laying down the standards for laboratories; to develop National and Regional DNA Data Banks for the maintenance of national DNA database for identification of victims, accused, suspects, under trials, missing persons and unidentified human remains; to provide for the conditions under which the samples for DNA profiles derived from the samples may be retained for the periods or within which they must be destroyed, and for matters

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<sup>31</sup> AIR 1975 SC 2161

<sup>32</sup> The DNA based technology (Use and Regulation) Bill, 2017, 58 of 2017

connected therewith or incidental thereto. There is a lacuna in the bill, as it considers only DNA-based technology. This bill can be amended to include all branches of forensic science. It needs to incorporate:

**(1.2) The A. P. Shah Committee Report<sup>33</sup>** In October 2012, an expert committee headed by Hon'ble Justice Ajit Prakash Shah presented its report, suggesting that there should be safeguards to prevent the illegal collection and use of DNA data, further providing safeguards to prevent the proposed body from misusing the same. That there should be a mechanism using which citizens can appeal against the retention of data. The report also suggested that there should also be a mechanism of appeal under which citizens under trial can request for a fresh sample to be taken. The samples were to be taken after consent in the case of victims and suspects. 6.5 The Committee noted that before giving the data to a third party, the person must be notified, and consent must be sought if the third party was not an authorized agency. The purpose for which data was being collected should be stated publicly, and the data should be destroyed after the goal has been served and the time frame has expired.

**(1.3) Due consideration to be given to the Malimath Committee Report<sup>34</sup> which recommended that**

(1.3.1) Police Manuals and Standing Orders of different States/Union Territories need to be amended to make the use of Forensic Science mandatory in the investigation of all grave crimes.

(1.3.2) Police Manuals and Standing Orders should mandate the supervisory officers to carefully monitor and scrutinize if or not the I.O.s have exploited the possibility of the use of forensic science in the investigation of each crime right from the threshold of the inquiry.

(1.3.3) The State Governments should immediately create appropriate forensic science facilities in each District. This should include one or more Mobile Forensic Science Units, depending on the size of the District, the incidence of crime, terrain, and communication conditions in each District. Each unit should have a Forensic Expert, a fingerprint expert, a Photographer, and a Videographer.

(1.3.4) Each police station should be provided with a set of Scientific Investigation Kits to identify and lift scientific clues from the crime scene. (5) Arrangement should also be made to create proper

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33 Report of experts group on privacy" (Chaired by Justice AP Shah, former chief justice, Delhi High Court), submitted to the Planning Commission on 16 October 2012

34 Malimath Committee Report on Reform of Criminal Justice System, 2003

facilities for packaging, storage, and preservation of scientific clue material collected from the crime scene or suspects, to ensure their protection against contamination, degradation, or damage at the police station or in the District Headquarters. Standard material for packaging

(1.3.5) A mandatory time limit should be prescribed for the submission of reports to the police/Courts by the FSLs

## **2. Laws enacted by foreign countries:**

**(2.1) Argentina's National Criminal Procedure Code** was amended in 2009 to provide for a uniform approach to DNA testing in cases of illegal adoption and falsification of identity under Article 218, empowering Judges to order compulsory DNA testing in certain circumstances. They have established a **National Bank of Genetic Data and DNA**<sup>35</sup> The Argentine DNA Law does not leave any option respecting the right wherein anyone refuses DNA testing and prevents the individual from exercising privacy.

**(2.2) United Kingdom:** In 1994, the **British Parliament passed the Criminal Justice and Public Order Act**, which provided the legal foundation for the National DNA Database (NDNAD). The Act allows the police to take DNA samples without consent from anyone charged with any offense classified as 'recordable', and search the database speculatively for matching profiles<sup>36</sup>. **In R (on the application of S) v. Chief Constable of South Yorkshire**<sup>37</sup>, the court of appeal emphasized the importance of forensic sciences by stating that So far as the prevention and detection of crime is concerned, it is obvious that the larger the data bank of fingerprints and DNA samples available to the police, the greater the value of the data bank will be in preventing crime and detecting those responsible for the crime.

**(2.3) United States of America:** The Federal Bureau of Investigation in the early 1990 "s designed the **Combined DNA Index System (CODIS)** to amalgamate forensic sciences and computer technology into a productive apparatus for solving severe crimes<sup>38</sup>. This has been corroborated by the U.S. Supreme Court's recent judgment in **Maryland v. King**<sup>39</sup>, wherein it was held that when

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35 Prof Elizabeth B. Ludwin King (A Conflict of Interests: Privacy, Truth and Compulsory DNA Testing for A g i ' Chi f h Di pp ) 11

36 Law Commission of India, 271th Report on Human DNA Profiling – A draft Bill for the Use and Regulation of DNA-Based Technology , July, 2017

37 (2003) 1 All ER 148

38 Law Commission of India, 271th Report on Human DNA Profiling – A draft Bill for the Use and Regulation of DNA-Based Technology , July, 2017

39 Ct. 1958 (2013)

officers making an arrest for a serious offense are authorized to take and analyze a cheek swab of the arrestee 's DNA.

It is suggested that the new legislation needs to ensure that a person's consent is taken before collecting his data through the use of forensic arresting. Some standard set of procedures needs to be laid down so that the citizen is aware of the purposes behind his data collection. Some guidelines must be established for conducting an investigation to avoid contamination of evidence collected from the crime scene. Since the courts have the final say on the admissibility of evidence, judges must be given more training in the arena of forensic sciences. Though our judges have efficiently prevented the miscarriage of justice by judging fairly in criminal cases, they base their reliance on expert opinion. Still, if the judges themselves have profound knowledge of forensic science, this would expedite the administration of justice.

Further, the new legislation must also ensure that when personal data is collected, such as fingerprints, etc., it is only used for that particular case, and it should not be retained for a longer time. If it is retained, it needs to be established as to why the personal data is being retained. Lastly, there should be a quasi-judicial body appointed for appealing the data/ evidence collected. Enacting such legislation will ensure that the police conduct investigation properly and the judges make even more sound decisions. It will also ensure that the public and the accused are made aware of the evidentiary aspects and the forensic sciences to defend themselves if the evidence leads to an adverse inference against them.