

LEGALFOXES LAW TIMES

EVIDENTIARY VALUE OF DNA TEST IN INDIA

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Human personality, behaviour, and physical characteristics are determined by DNA structure. The chromosomes in living things' cells contain DNA (deoxyribonucleic acid), which serves as the blueprint for each person. Six billion base pairs in 46 duplex threads of DNA make up the 46 chromosomes that make up a human cell's 46 chromosomes. Thymine, adenine, guanine, cytosine, and phosphoric acid, four nitrogenous bases arranged in a regular structure, make up DNA. Red corpuscles do not have it; only white corpuscles do. Each person has a unique set of genetic characteristics. It can be extracted from bodily fluids like hair, blood, saliva, semen, urine, and body organs, and it can be compared to DNA samples taken from particular persons. DNA analysis is also referred to as DNA profiling or DNA typing. DNA testing is now frequently used as evidence in criminal cases. Additionally, it is employed in civil cases, particularly when establishing paternity of identity.

DNA testing is so sophisticated, that even if blood is broken down, the DNA is still stable unless it is burned by fire.¹ In order to identify a person from their DNA sample or establish biological relationships between people, DNA analysis is a very useful and precise technology.

- Bloodstains on clothing or even hair from the crime scene, for instance, can be compared to DNA from a suspect and, in most cases, it can be determined conclusively whether the DNA in the sample belongs to the suspect. As a result, DNA technology is being used more frequently to solve crimes, identify unidentified bodies, and establish parentage.
- However, information from DNA samples can provide more invasive details about a person, such as their allergies or propensity for certain diseases, in addition to physical characteristics

¹ Dharam Deo Yadav v. State of Uttar Pradesh, 2005 DNR (HC) 675.

like eye or skin colour. As such, there is a higher chance that information obtained through DNA analysis will be misused.

- It is anticipated that increased use of DNA technology will speed up the administration of justice and increase conviction rates, which are currently only around 30%. (NCRB Statistics for 2016).

DNA and Indian Evidence Act

According to the Indian Evidence Act, the opinions of individuals who are knowledgeable about the relevant foreign law, science, or art, as well as handwriting or fingerprints, are relevant when the court is forming an opinion.² These individuals are referred to as experts. Furthermore, according to the Indian Evidence Act, facts can be proven even if they do not directly relate to the fact at hand if they contradict or differ from the expert opinion.³ Because they enable the courts to make logical inferences from the facts and are based on the opinions of experts in the relevant field. Indian courts have thus recognised the relevance of expert opinions. Guidelines regarding DNA tests and their admissibility to establish parentage have been established by Indian courts.

Any petition submitted for a blood test cannot be taken into consideration immediately. The petitioner's evidence must be convincing enough to prove that there is no access in order to disprove the presumption created by section 112 of the Indian Evidence Act. The decision to order the blood test could result in the wife and child being labelled as unchaste women, so the court must exercise caution in making this order. As a result, it is illegal to force someone to provide a blood sample for DNA testing.

DNA technology and detection of crime

There are no express legal requirements for using DNA analysis to find criminals. However, DNA testing is impliedly permitted by Sections 53 and 54 of the Criminal Procedure Code of 1973, and it is used to resolve complicated criminal cases.

² Sec 45 of Indian Evidence Act, 1972

³ Sec 46 of Indian Evidence Act, 1972

According to the Criminal Procedure Code, the police officer has the right to believe, on reasonable grounds, that the examination of the accused will reveal evidence of the commission of the crime.⁴

According to the Criminal Procedure Code of 1973, an arrested person may request to be examined by a licenced medical professional.⁵ According to the 37th Law Commission Report, if the nature of the offence warrants reasonable grounds, a registered medical professional may examine the arrested person in order to conduct an effective investigation and provide evidence if necessary.

A registered physician working in a government hospital is permitted to examine a person who has been arrested on suspicion of committing a rape or rape attempt if there are good reasons to believe that doing so will reveal evidence about the commission of the alleged crime⁶.

Further, the amendment to the criminal procedure code states that the examination shall include the examination of semen, blood stains, blood, swabs in the case of sexual offences, sweat, sputum, fingernail clippings and hair samples using scientific and modern techniques, including DNA profiling and such other tests as the registered medical practitioner thinks necessary in a particular case⁷.

By emphasising the need for forensic sciences to be used in criminal investigations of rape cases, the "Malimath Committee" advocated for reform of the criminal justice system. Further suggestions were made to include DNA experts under S. 293(4) of the CrPC, which refers to scientific experts, and which were considered in the amendment that followed. They also suggested adding more labs to handle DNA evidence and samples. They also advocated for a uniform statute that would cover DNA collection, testing, admissibility, and misuse protection. It also suggested changing S. 313 of the Criminal Procedure Code so that if the accused is unable to respond to any pertinent material question against himself, a negative inference can be made against him. The committee also advocated for the creation of a special law that would give the police clear instructions and standards for gathering genetic data on the parties in question. This

⁴Sec 53 of Cr.P.C.,1973

⁵ Sec.54 of Cr.P.C., 1973

⁶ Sec.53A of Cr.P.C., 1973

⁷Subs. By Cr.P.C (Amendment) Act, 2005 (Act No.25of 2005), dated 23-6-2005.

would establish sufficient safeguards to stop any DNA from being misused. It is possible to create a national DNA database, which would be very beneficial in our fight against terrorism.

In 1986, when Colin Pitchfork was accused of murder and rape and was found guilty thanks to these tests, the British used DNA finger-printing for the first time.

The significance of DNA was mentioned in "Thograni v. State of Orissa."⁸ In recent years, India has seen an increase in DNA evidence application in criminal investigations. Law enforcement has benefited from the use of DNA testing to catch criminals and resolve serious criminal cases. However, DNA evidence has shown that most of them who have been convicted are actually innocent. One of the first instances where the High Court mandated a "DNA test on a foetus of a rape victim" was "Geeta Saha Vs. NCT of Delhi"⁹

The gathering of DNA evidence is not limited to the accused or the victim; it can also be done on the witness, and any person who may have engaged in consensual sexual activity with the accused within 72 hours of the incident. As a result of the ruling in "K.S. Puttaswamy v. Union of India,"¹⁰ the "Right to Privacy" is now acknowledged as a fundamental right.

According to the Prevention of Terrorism Act of 2002, the accused may legally be ordered by the court to provide the samples to the police officer, either directly or through a medical professional, depending on the circumstances if the investigation officer has reasonable suspicion of a person being involved in the commission of an offence and the investigation officer in writing requests the court for the samples of their fingerprints, handwriting, footprints, saliva, blood, hair, photographs, and voice of any accused person.¹¹

The Identification of Prisoners Act of 1920 allows the Investigation officers to obtain the suspect's fingerprint and footprint impressions. A magistrate has the authority to order a person to be measured or photographed under Section 5 of the Act. Here, measurement refers to and incorporates footprint and fingerprint imprints. However, this act does not give a magistrate the authority to order a person to have his X-ray or ultrasonography taken in the event that the suspect ingests significant material that may be stolen property or other material required for an

⁸ 2004 CriLJ 4003.

⁹ [1999] 1 JCC 101.

¹⁰ (2017) 10 SCC 1

¹¹ Sec 27(1) of Prevention of Terrorism Act 2002

investigation. This act is silent regarding the removal of other bodily fluids from the body of the suspect for DNA testing, such as urine, blood, hair, etc.

DNA Analysis and Self Incrimination

A person accused of a crime cannot be forced to testify against him or herself. It must be proven that the accused was coerced into making the statement that was likely to implicate himself in order to qualify for the protection of Article 20(3) of the Indian Constitution. DNA testing is not the same as admitting guilt. In *Selvi v. State of Karnataka*¹², the Constitution Bench of the Hon'ble Supreme Court made the following observation as it considered the applicability of Article 20(3) of the Indian Constitution to the validity of DNA tests.

“The matching of DNA samples is emerging as a vital tool for linking suspects to specific criminal acts. It may also be recalled that as per the majority decision in Kathi Kalu Oghad¹³, the use of material samples such as fingerprints for the purpose of comparison and identification does not amount to a testimonial act for the purpose of Article 20(3). Hence, the taking and retention of DNA samples which are in the nature of physical evidence does not face constitutional hurdles in the Indian context.”

The Supreme Court's various rulings over the years have made it abundantly clear that the rights to life and personal liberty guaranteed by our Indian Constitution are not absolute and may be subject to limitations. And it is on the basis of this that the Supreme Court upholds the constitutionality of laws affecting the right to life and personal liberty, including laws requiring medical examination. And it is based on the fact that numerous courts across the nation have approved the use of DNA technology in an investigation and the production of evidence.

DNA Technology (Use and Application) Regulation Bill, 2019

The 2019 DNA Technology (Use and Application) Regulation Bill was initiated and passed in the lower house, but even before it was introduced in the upper house, it had already expired. As a result of being referred to the Parliamentary Standing Committee by Lok Sabha, it is currently

¹² AIR 2010 SC 1974

¹³ AIR 1961 SC 1808

pending after being reintroduced in July 2019. The purpose of the proposed legislation is to "provide for the regulation of use and application of deoxyribonucleic acid technology to establish the identity of certain categories of persons, including victims, offenders, suspects, undertrials, missing persons, and unknown deceased persons, and for matters connected therewith or incidental thereto."¹⁴ The Bill authorizes an independent DNA Regulatory Board with a number of responsibilities, the most important of which are to supervise DNA data banks and laboratories,¹⁵ to establish procedures for the communication of information relating to DNA profiles in civil and criminal proceedings,¹⁶ to ensure that collection and use of DNA samples according to international guidelines relating to individual rights to privacy and civil liberties,¹⁷ and to advocate the privacy issues relating to DNA data banks and laboratories a requirement for all DNA testing facilities.¹⁸ Additionally, it will advise the federal and state governments on issues pertaining to DNA labs, databanks, and everything else associated with them.¹⁹

Every DNA laboratory is required to apply for Board accreditation and adhere strictly to all regulations for the gathering, storing, testing, and analysis of DNA samples. The national and local DNA databanks will receive the collected data. The laboratories will be in charge of making sure that their staff members receive the proper training to advance their expertise in DNA testing, as well as setting up the necessary infrastructure and security measures to prevent sample contamination. In cases where the case has not been resolved or a court order has not been issued, it is required that the labs destroy the subject's samples and notify them. Except for some specific offences, which are offences punishable by imprisonment or death for a term exceeding 7 years,²⁰ Section 21 of the Bill mandates that the investigating authorities should obtain prior consent from the person whose DNA sample is required. The Bill also specifies in great detail how and where samples can be obtained, including from bodily fluids, clothing, intimate and non-intimate bodily fluids, etc.

The most important part of the Bill, the DNA databank, which calls for the establishment of national and regional DNA databanks, is covered in Chapter V. The national data bank must

¹⁴ DNA Technology (Use and Application) Regulatory Bill, 2019

¹⁵ *ibid* S.12(c)

¹⁶ *ibid* S.12(g)

¹⁷ *ibid* S.12(i)

¹⁸ *ibid* S.12(k)

¹⁹ *ibid* S.12(a)

²⁰ *ibid* S.20

receive the information gathered from the regional data bank. Additionally, there is a process for exchanging and communicating DNA profiles. The profiles must only be shared with authorised individuals; no comparisons may be made if the subject is neither an offender nor a suspect nor an accused.

The data in the crime scene index will be preserved and may only be removed under the circumstances outlined in Section 31 Anyone who is not an offender, suspect, or witness in a pending case may also request that it be taken away.²¹ The Bill makes sure that no records, including those pertaining to DNA profiles, are disclosed, and that all information in the data bank and with the labs is kept private and secure²². Additionally, as stated in the Bill, the information is only to be disclosed for specific purposes to a select group of individuals.

The Bill also talks about offences and outlines punishments and penalties for them in a separate section. Unauthorized access to data, misuse of DNA samples, and destruction or tampering with biological evidence are just a few of the crimes that can be committed.

After examining the fundamental components of the Bill, it is critical to now balance its advantages and disadvantages.

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Provisions of the Bill

The researcher thinks that there are still some features of the Bill which are worth and cannot be ignored, even though the majority of the debate has focused on its flaws, which is understandable. First off, the Board Committee has a very diverse membership. Any regulatory body must have members with the necessary industry knowledge and the ability to independently think through the Board's operations without being swayed by the executive, which, in fact, does

²¹ *ibid* S. 31(2) "The Director of the National DNA Data Bank shall remove from the DNA Data Bank the DNA profile,—

(i) of a suspect, after the filing of the police report under the statutory provisions or as per the order of the court;

(ii) of an undertrial, as per the order of the court,

under intimation to him, in such manner as may be specified by regulations.

(iii) The National DNA Data Bank shall, on receiving a written request of a person who is neither an offender nor a suspect or an undertrial, but whose DNA profile is entered in the crime scene index or missing persons' index of the DNA Data Bank, for removal of his DNA profile there from, remove the DNA profile of such person from DNA Data Bank under intimation to the person concerned, in such manner as may be specified by regulations."

²² *ibid*, S. 32

occur in many Board Committees. The Bill calls for the establishment of a regulatory body that includes experts from the scientific and forensic fields as well as those who represent organisations of human rights (National Human Rights Commission of India) and investigating agencies (National Investigating Agency) that are actively engaged in looking into criminal matters.²³

Second, the bill makes sure that DNA profiles which are not necessary are not kept in the databank, especially for those who are not suspects, defendants, or offenders. Additionally, it has given citizens whose profiles have been entered in the databank the option to request the removal of their information in writing to the databank. Even for those whose profiles were kept, communication of such profiles was restricted to a small group of authorities, and any violations were sanctioned. This action should prevent any unauthorised use of the databank-stored profiles. This can also be seen as an expansion of the "right to be forgotten" clause in the privacy right.

Last but not least, the Bill requires the Board to adopt procedures for sample collection that respect people's right to privacy and adhere to all ethical and human rights considerations, including UN international guidelines regarding DNA testing. Unfortunately, India still lacks comprehensive data protection and privacy laws, but this clause will make sure that concerns about civil liberties and other social effects of DNA technology adoption are taken into consideration. This responsibility does not just apply to the Board; it also includes making recommendations to the Government regarding the use of privacy protections regarding access to or use of DNA samples, their analyses, and other personal information.

Demerits of the Bill

The most important requirement for any law that seeks to violate someone's privacy is that it must make sure that the individual data which is collected by authorities is not violated, and strict laws are required to protect the individual and punish the offender in the event of a violation. Since there is no law in our nation that specifies any protection from data leakage, the Bill has rightfully raised many concerns about citizens' rights to privacy.

²³ *ibid*, S.4

In the event of a breach of such data, the authority (national/regional DNA databank) is not subject to any specific penalties. As was already mentioned, the Bill has many provisions to make sure that the institutions in charge of DNA profiles that contain a lot of personal data maintain their secrecy and don't share it carelessly. When improper handling occurs, the higher authority is not directly held accountable.

Our criminal justice system is particularly susceptible to abuse in the form of evidence tampering, manipulation, or data handling at both the collection and examination levels because it lacks the knowledge and resources required to use DNA technology effectively. There are numerous technical flaws that make it possible to tamper with the evidence.

Secondly, the regulatory board is given overriding authority to act without any checks under Section 57 of the Bill²⁴, which completely revokes the court's jurisdiction over any issue that must be resolved by the Board. As a result, the courts are unable to challenge any action taken by the Board. This clause is inconsistent and shouldn't be applied. In case of lack of a law that can make a government entity accountable for violating a citizen's fundamental right to privacy, a citizen's only recourse is to file a lawsuit. If the Board makes any arbitrary and unlawful decision, the court's jurisdiction will be revoked and there will be no recourse available.

Thirdly, any investigative body must be independent so that the government cannot significantly influence how it operates or makes decisions in order for it to function without interference from the executive or legislative branch. The Bill has given the Government significant authority to advise and direct the Board, to the point that, in the event of a disagreement, the Government's decision will always take precedence. Without sufficient independence, there is a greater risk of tampering evidence and improper handling in forensic science institutions that directly report to law enforcement agencies and the relevant Home Department.²⁵

Conclusion

Forensic science, and particularly DNA technology, has become increasingly necessary in criminal investigations in India over the past few years. DNA was discovered in the 20th

²⁴ *ibid*, S.57

²⁵ R. Dinkar, Forensic Scientific Evidence: Problems and Pitfalls in India, 3 International Journal of Forensic Science & Pathology 79, 80 (2015).

century, and ever since, it has proven to be one of the most effective discoveries, having a significant impact on modern science and medicine. DNA technology is currently employed in India to resolve both civil and criminal disputes. Regarding the use of DNA evidence in criminal justice system, India is still dealing with a number of problems.

The privacy rights of those who provide samples and permit authorities to access all of their personal information are the most obvious legal issue in relation to the technical challenges that the use of DNA evidence faces. The Supreme Court upheld privacy as a fundamental right, and it can only be restricted by creating a legal provision that is justified. There should be a strong law that permits the secure use of the data, and if the data is ever misused, the guilty party should face harsh penalties.

Although the Government's introduction of the DNA Technology (Use and Application) Regulation Bill is a step in the right direction toward validating DNA profiling, it is not exempt from criticisms made after review by the Parliamentary Standing Committee on Science and Technology, the Environment, and Forestry. Although the Bill fairly addresses privacy issues, there are still many gaps in the Bill that allow for data misuse. It is beyond dispute that a law like this will serve many other purposes well. Before enacting any new laws likely to violate people's privacy, the Indian government must pass the Data Protection Bill. Those whose rights are being violated will have access to a remedy laid down in this legislation.
