



Legality of DNA profiling and need for DNA legislation

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Abstract

Today, crime is being committed in more sophisticated methods and in an organized manner. Due to the advancement of technology, the methods for the commission of crime have undergone a radical change. For the criminal justice system to be effective in dealing with this situation, investigations and dealing with crime will have to keep up with the modus operandi of the criminals. The only way to tackle this problem is to bring about major changes in the criminal investigation process. Scientific methods of investigation of crime with the aid of forensic science have been accepted all over the world. Among the various tools of investigation used by the investigating agency, DNA is the most powerful tool. DNA PROFILING emerged as a reliable source of scientific evidence because it has the possibility to determine whether the biological clues at the crime scene come from the person suspected of the crime or not. Hence, it is very useful in the investigation of criminal cases as well as in paternity disputes. Almost all countries have enacted appropriate laws within the framework of their constitutions and other legal frameworks for scientific investigation. But in India, in the absence of specific legislation on DNA, it has posed serious challenges to some legal and fundamental rights of an individual, such as "Right to privacy" and "Right against Self-incrimination". In this article, I would like to focus on what are the constitutional impediments to scientific investigation and the need for specific legislation on DNA for the effective administration of the criminal justice system. The proposed DNA bill in India is also analyzed.

Keywords: Crime, DNA, laws, constitution

Introduction

1. DNA Profiling

As far as the recent advance in forensic science is concerned, the year 1985 is considered to be the most significant year. The first forensic application of the DNA test was done in 1986 by Sir Alec Jeffrey of England in the famous Collins case. DNA technology has continued to rapidly evolve after that. The complete analysis of DNA is known as DNA Profiling. A DNA profile is a record created based on DNA samples. DNA is a molecule that gives genetic information to all living organisms. It can be obtained from any biological material such as bone, blood, semen, saliva, hair, skin, urine, etc. Generally, when the DNA profile of a sample found at the scene of a crime matches the DNA profile of the suspect, it can then be concluded that both the samples have the same biological origin, i.e., belong to the same person. Hence, it is a valid and reliable evidence, but the variance in the particular result depends on the quality control, handling of forensic evidence, and procedures in the forensic laboratory.

2. Applicability of dna evidence in India

The laws relating to the application of DNA technology in India in the investigation and prosecution of crimes can be mainly found in The Constitution of India, 1950, The Code of Criminal Procedure, 1973 ^[1], and The Indian Evidence Act, 1872 ^[2]. These provisions enable the state to make the investigation more effective and scientific, and thereby protect the rights of the victim as well as the accused

2.1 The constitution of India, 1950

The Constitution of India casts a duty on every citizen of India to develop the scientific temper, humanism, and the spirit of inquiry and reform, and to strive towards excellence in all spheres of individual and collective activity so that the

nation constantly rises to higher levels of endeavor and achievements ^[3]. Parliament is competent to undertake legislations which encourage various technological and scientific methods to detect crimes, speed up investigations, and determine standards in institutions for higher education and development in technical institutions (Entry 65 & 66 of the Union List). It shows that besides the rights guaranteed to citizens, the Constitutional provisions take care of the scientific developments and put it to use for the benefit of the people. This provision provides that scientific and technological methods can be adopted for the detection of criminal investigations.

The introduction of the DNA technology has posed serious challenges to some legal ^[4] and fundamental rights of an individual such as "Right to privacy ^[5]," "Right against Self-incrimination" ^[6]. This is the most important reason why courts sometimes are reluctant to accept the evidence based on DNA technology.

2.2 Right to privacy

It means the right of a person to "withdraw or participate as he sees fit, or right to control or disseminate the information about him". Accordingly, Prof. Alan F. Westin writes in his book states that, "Studies of animal behavior and social organization suggest that man's need for privacy may well be rooted in his animal origins, and that man and animal share several basic privacy mechanisms among their followers ^[7]. The foundation of the concept of the right to privacy was established by Justice Cooley in 1888, using the words "the right to be let alone ^[8]."

The Constitution does not expressly guarantee the right to privacy as a fundamental right. In our country, the sole credit goes to the judiciary for recognizing the concept of privacy. The Constitution of India guarantees "No person shall be deprived of his right to life and personal liberty

except according to the procedure established by law". This means that to secure the liberty of a person, there shall be a law, and that law must be a valid one. In the absence of an express guarantee of the right to privacy, an understanding of the scope of this right can only have from the decisions of the apex court.

The issue of privacy was decided for the first time by the Supreme Court in *Kharak Singh v State of U P* ^[9]. The main question in that case was whether the surveillance under the Uttar Pradesh Police Regulations constituted an infringement of the citizen's fundamental rights as guaranteed by the Constitution. The court held that the right of privacy is not a guaranteed fundamental right under our Constitution and therefore the attempt to ascertain the movements of an individual which is merely a manner in which privacy is invaded is not an infringement of fundamental right guaranteed under Part III ^[10].

The question whether taking blood or bodily sample for DNA analysis was violative of Right to privacy under Article 21 of the Constitution of India was discussed in *Sharda v Dharmpal* ^[11]. In this case the respondent opposed an order for DNA test on the ground that compelling a person to medical examination by an order of the court would be violative of their right to personal liberty guaranteed under Article 21 of the Constitution of India. The court held that Article 21 cannot be treated as an absolute right, and passing an order compelling a person to undergo a medical examination would not be violative of the right to personal liberty under Article 21. Again in *Thogorani alias K. Damayanti v. State of Orissa* ^[12], it was held that the only restriction for issuing a direction to collect a blood sample of the accused for conducting a DNA test would be that before passing such a direction, the courts should balance public interest and the right guaranteed under Article 21. Hon'ble Supreme Court in *K.S. Puttaswami v. Union of India* observed that privacy is not a guaranteed fundamental right. Though a dissenting judgment, Justice Subba Rao opined that even though the right to privacy was not expressly recognized as a fundamental right, it was an essential ingredient of personal liberty.

Right to privacy, though not guaranteed by the constitution, the Supreme Court recognized the right and read it in the ambit of Art 21 of the constitution. Though it is a guaranteed right under Article 21 of the Constitution, it can be infringed in compelling public interest or if there is any procedure established by law. The above cases show how far the right to privacy could be extended against the ordering of forensic examination

2.3 Right against self-incrimination

The right against self-incrimination as a constitutional impediment arises in the present context because of the overwhelming chances wherein an investigation agency may forcefully subject the accused to undergo the collection of samples for scientific evidence, like DNA evidence. The Constitution of India provides that "No person accused of an offence shall be compelled to be a witness against himself" ^[13]. This fundamental right works as a protection to an accused person charged with a criminal case against compulsion to give evidence against himself / herself ^[14]. The legislative intention behind this protection is to encourage a free atmosphere in which the accused/witnesses can be persuaded to come forward to furnish evidence to

Police and courts within their knowledge and in their possession.

In India the expression Right against Self Incrimination had been a subject of great controversy till it was ultimately settled by the Supreme Court in *State of Bombay v Kathi Kalu Oghad* ^[15]. The main question before the Supreme Court was "whether taking of fingerprint was violative of Right against self-incrimination. In this case after an elaborate discussion the Supreme Court reached the conclusion that 'The use of material samples such as finger print for the purpose of comparison and identification does not amount to testimonial act and Article 20(3) Prohibit only forcing testimony and by incriminate him to crime". The Court also clarified that "mere questioning of a person in police custody and he is giving a voluntary statement which might ultimately turn to be incriminatory not a compulsion. Accordingly giving thumb, finger, or foot impression, or exhibiting any parts of body by way of identification are not included in the expression to be a witness." ^[16]

In *Swathi Lodha v. State of Rajasthan* ^[17], it was held that if a party refuses to comply the blood test, the court may at its discretion infer corroborative evidence against him. The constitutionality and evidentiary value of scientific evidences had been a serious issue in India till the decision of *Selvi v. State of Karnataka* ^[18]. The main issue involved was whether narco analysis, brain mapping, and polygraph could be used as constitutionally valid methods for gathering evidences. As the Supreme Court held that no individual should be forcibly subjected to any of these techniques in question, whether in the context of investigation in a criminal cases, or otherwise. Court also held that DNA and such other tests used in the section 53 CrPC are confined to include only those tests which involved examination of physical evidence can be permitted.

Therefore, the taking of the DNA samples which are like physical evidence does not violate Article 20(3) of the Constitution. The foregoing analysis of the above cases shows that taking blood samples for investigation will not amount to self-incrimination, as they are physical evidence which are used for comparison.

Criminal investigation

DNA technology has received serious attention in criminal investigations since the advent of fingerprint identification. DNA can be collected from two sources: human bodies and small samples of bodily material. The technique of DNA fingerprinting has been acknowledged as the greatest breakthrough in forensic science because of the sheer magnitude of its impact on science and law ^[19]. It has become established that DNA evidence can solve particularly difficult cases, when all the investigative techniques failed. DNA techniques provide clues to the investigative agencies when there is no witness to crime. Small amount of biological samples are enough for effective DNA analysis. Even a smaller fraction makes one person different from other. DNA profiling is complementary to conventional blood grouping in a rape investigation because blood group substances are contained within the seminal fluids, while DNA contained in the sperm, which can be separated and kept frozen ^[20].

In *Sushil Sharma v. State of N.C.T. Delhi*, the accused Sushil Sharma murdered his wife, and he took her body to a restaurant, attempted to burn the body in a tandoor. Blood-

stained clothes and a revolver found at the spot were sent to the forensic science laboratory. Police also took samples from the parents of the deceased. Based on scientific evidence trial court convicted Sushil Kumar under section 302 of the IPC. On appeal Supreme Court also confirmed the conviction but commuted the death sentence to life imprisonment. Though the body material was too much charred, as the victim was burned in an oven and hence the bone marrow was used to identify the victim. This case testifies that DNA evidence plays an important role in identifying the person. even from a charred body, DNA evidence becomes crucial in deciding the guilt of the accused.

In *Dharam Deo Yadav v. State of U P* ^[21], the case was related to rape and murder of 23 year old Dayana a foreign woman. the Supreme Court emphasized the need of scientific investigation and pointed out that even the when the reliable witness for prosecution turned hostile due to fear, or some other reasons, the investigating agency had to look for other ways to improve the quality of investigation, that can be done only through scientific evidences. The court also held that DNA profile was consistently held to be valid and reliable, but it depends on quality control and quality assurance procedures in the laboratory.

The code of criminal procedure

The provisions for medical examinations have been incorporated under the Code of Criminal Procedure, 1973 ^[22]. Section 53 of the Code, states that if there are reasonable grounds for believing that the examination of the body of an arrested person will give evidence as to the commission of a crime, then medical examination can be conducted by a registered medical practitioner at the request of a police officer. This section also permits the use of reasonable force necessary for medical examination. Whether the police officer to take the blood sample for investigation, under section 53 CrPC was challenged in *Anil Anantrao Lokhande v. The State Of Maharashtra* ^[23].

The petitioner contended there were no provisions in the CrPC that enable the police to take blood sample of the accused for determining his blood group. He also contended that by this process, he is forced to give evidence against himself or being compelled to be a witness against himself. The court relied on its earlier decision in *State of Bombay v. Kathi Kalu Oghad* ^[24] in which it was held that giving a thumb or finger impression or exhibiting parts of the body by way of identification are not included in the expression "to be witness". Hence, it was held that there should not be any constitutional impediment in asking a person to give a sample of his blood for DNA analysis ^[25]. It also pointed out that the blood test becomes routine for effective investigation and that there is nothing as brutal as offensive or shocking in taking a blood sample under the protective eye of law by registered medical practitioner ^[26].

The scope of section 53 Cr P C was expanded in the year 2005 ^[27] so as to include the examination of blood, blood stains, semen, swabs in case of sexual offence, sputum and sweat, hair samples and finger nail clippings, by the use of modern and scientific technique including DNA profiling and such other tests which the registered medical practitioner thinks necessary in a particular case. Two sections were also introduced by this amendment, viz., sections 53A and 164A, which authorized the investigating officer to collect DNA sample from the body of the suspect

as well as the victim with the help of a registered medical practitioner

Hon"ble Supreme Court held that Cr. P.C. (Amendment) Act, 2005 was brought to overcome the difficulty of prosecuting agency to detect serious offence like rape ^[28].

It is a fundamental principle of criminal law that every individual shall have the right to privacy, and everyone shall have the right not to be a witness against himself. But the question arises when a new forensic tool is used in the investigation, whether it amounts to infringement of the above-stated rights of an individual. As far as DNA profiling is concerned, the situation is not different. The question of whether DNA profiling amounts to self-incrimination or infringement of the right to privacy is still unanswered. Moreover, it is a sad truism that India still do not have legislation on DNA profiling even though it has been used in the administration of the criminal justice system since 1985.

Indian evidence ACT, 1872

Apart from the Code of Criminal Procedure, the Indian Evidence Act, 1872, comprehends policies regarding the admissibility of scientific evidence. Section 45 deals with the Opinion of experts. Courts in India held that even though Section 45 does not expressly say the opinion of a DNA expert as an expert opinion but it can be included under Section 45 of the Indian Evidence Act, or whether the term Science covers a DNA test that requires special study or experience necessary to the formation of an opinion. In *Kunjiraman v. Manoj* ^[29], the Kerala High Court concluded that that as per section 45 of the Indian Evidence Act, evidence given by a DNA expert is admissible just like the opinion of a chemical analyst or fingerprint expert. In *Patangi Balarama Venkata Ganesh v. State of A P* ^[30], where the court highlighted that evidence of DNA expert is admissible in evidence as it is a perfect science. The same view was also upheld in *Santhosh Kumar Singh v. State through CBI* ^[31] where the Apex Court held that DNA evidence was scientifically accurate and there was no doubt that DNA Fingerprinting is an exact science.

In today's world, it becomes inevitable to use modern technology as a means of collecting scientific evidence to prove the case. However, a lot of questions have been raised regarding the nature of scientific evidence and the methods required for its collection, as it will violate right to privacy. Many countries have been able to strike a balance between the use of these methods for evidence and the right to privacy of its people. With regard to legal and judicial recognition of DNA profiling in the USA and the UK, both have a number of statutes and case laws dealing with DNA profiling which expressly provide about how, when, whom these tests to be conducted in clear terms.

United States of America

In USA DNA Identification Act 1994, Transplantation of Human Organs Act 1994, DNA Backlog Elimination Act 2000, Advancement of Justice through DNA Technology Act, 2003, and the Innocence Protection Act 2004 are legislations dealing with DNA profiling. Even though no aspect of human life remains uncovered from the purview of Privacy in USA but the Combined DNA Index System (CODIS), the federal system for the collection, analysis, storage, and use of DNA samples for forensic purposes, as established by the DNA Identification Act of 1994 is not violative of individual right of privacy.

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 offence that is classified as 'recordable', and also to search the database speculatively for matching profiles. The police and Criminal Evidence Act and, Protection of Freedom Act are also major legislation dealing with DNA profiling. In the UK, also taking of samples or conducting DNA tests is not a violation of the right to privacy. Moreover, the Right to Privacy is limited, and its limitations should always be remembered at the time of enacting any legislation or pronouncing any judgment for its protection.

The DNA Technology (use and application) bill of 2019

Even though DNA evidence was first accepted by the Indian courts in 1985 till there is no specific legislation in this area. The year 2003 marked the beginning of the initiations to draft a bill regulating the use of DNA samples for crime-related reasons. In 2007 a bill known as the Draft DNA Profiling Bill was piloted by the Centre. The Bill faced a lot of criticisms as it didn't address the privacy concerns. In the year 2018, the Law Commission of India in its 271 report prepared the draft bill named the DNA Based Technology (Use and Regulation) Bill 2017. In 2019, The DNA Technology (Use and Application) Regulation Bill, 2019 was introduced in the Lok Sabha. The bill has not been passed and is subject to severe criticism.

Defect free bill

In efforts to cope with the changing needs of the criminal justice system, The DNA Technology (Use and Application) Regulation Bill, 2019 was formulated. The Bill aims to create a National DNA database for use in criminal investigations and civil matters. The bill postulates that the data shall be used for identifying offenders, suspects, and victims in criminal investigations. It also explores the use of DNA Evidence in civil disputes relating to parentage, immigration, and organ transplantation.

But the bill is silent on many issues that directly affect its implementation.

- The Long Title of the Bill states that its purpose is to regulate the use of DNA technology to identify criminal offenders, victims, missing, and deceased persons. But it also deals with certain civil matters, about which the long title is silent.
- Regulation of laboratories that conduct DNA testing is an important point on which the bill is silent. The bill recommends the formulation of a Regulatory board. The board has been given wide discretionary power, even to amend the bill. Such wide powers, without any checks, can lead to corrupting the system, and serve the ones it seeks to perish.
- The Bill requires consent of an individual when DNA profiling is used in criminal investigations or identifying missing persons. Moreover, consent is necessary for offences above 7 years, which is purely irrational; however, such consent is not required in the case of DNA profiling for civil matters. Hence, the irrational classification of consent for criminal matters and the absence of consent in civil matters cannot be

justified. Such irrational classifications make it a violation of Article 14.

- The bill also fails to address adequately, the issues regarding protect data, transparency and use of Data and violation of the citizen's right to privacy.
- The bill treats data received for civil matters just like it treats the data for criminal matters there are no provisions for removal of DNA profiles procured for civil matters from the Data Banks. If DNA profiles related to civil matters were to be stored in the DNA Data Banks, there may be a violation of the right to privacy.
- The bill seeks to integrate DNA profiling methodology into the judicial system; however its implementation as postulated in the bill suffers from many procedural lacunas. The bill does not cover important points pertaining to privacy, monitoring and regulation. This leaves a huge scope for the provisions to be misused. No provisions about the removal of DNA profiles by DNA laboratories is specified in the Bill, which leaves room for suspicion regarding the authenticity of safety of data. The Bill does not provide any mechanism for redressal of grievances in cases where the DNA profile is not removed from the data banks by the Director of the National DNA Data Bank. This may violate the fundamental rights of people and in such a scenario may leave the affected person without any recourse.
- The bill attempts to cover a wide spectrum of evidence, like photographs or video recording of body parts, to be used as a source for sample collection; however lack of detailed provisions regarding the same lead to vagueness in the bill, regarding how things are to be carried out.

Hence the bill should be brought to limelight after the removal of the above said defects as it is not equipped to effectively use DNA technology and is prone to mismanagement

Conclusion

In every criminal justice system, DNA technology plays a vital role because of its uniqueness and use for identifying persons with great accuracy in crime detection. In India, though we have no specific legislation for DNA, admissibility of DNA evidence has been given much emphasis under the Indian Evidence Act, 1872, and the Code of Criminal Procedure, 1973. Due to lack of a proper guiding procedure, the investigating officers face much trouble for collecting evidence, which involves modern mechanisms and technology to prove the accused person guilty. Judges do not deny the use of scientific developments to solve criminal cases more accurately but the problem of self-incrimination and privacy safeguards come as a blockade to the use of DNA as evidence.

A comparative perspective of the UK and US evinces that there are specific legislations in tune with scientific techniques. Though we have provisions for medical examination in Cr P C and provision for admissibility of expert opinion under the Indian Evidence Act, the lack of specific legislation to deal with the scientific evidence leaves a big vacuum. The DNA Technology (Use and Application) Bill of 2019 is pending before the Parliament is a positive step in this regard and the Bill directs the

government, to establish a National DNA Data Bank and a DNA Profiling Board, and use the data for various specified forensic purposes. However, the Bill faced severe criticism regarding privacy and security concerns which were unaddressed. So the need of the hour is the enactment of a specific legislation effectively to use such evidence as valuable evidence in the justice delivery system.

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12. Sharda v. Dharmapal, 2003 (2) KLT 243 (SC).
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