



DNA-BASED TECHNOLOGY (USE AND REGULATION) BILL, 2019: PRIVACY V/S SPEEDY JUSTICE

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ABSTRACT

Deoxyribonucleic Acid or DNA, as it is commonly known, is one of the most universally used techniques to identify an individual. Since ages, forensic scientists have devised new technology to differentiate between individuals belonging to the same species, by analysing different bodily substances. Forensic science interplays with law, in order to ensure speedier delivery of justice. This is to ensure that no innocent man is convicted and that the perpetrator of the crime is apprehended at the earliest to save the society from more criminal elements. In order to meet this objective, several DNA based technology have been developed to assist forensic investigation. This has been instrumental in solving several cases where heinous offences have been committed, some of the most notable ones being the OJ Simpson Murder Case and the 6-Year-Old rape case at the Snohomish County Sheriff's Office. In India as well, this technology has been significant in improving conviction rates. Despite medical advancement in this regard existing since several decades, the legal development in this regard, particularly for the regulation and use of DNA Profiling Technology has not taken place. There have been several Bills drafted in this regard since 2003. However, the main concern regarding this Bill has remained the violation of privacy of an individual, particularly, the accused, the convict or the suspect. As a result, the Bill

has never been passed. The latest version of the Bill, named DNA Technology (Use and Application) Regulation Bill, 2019 provides for the institution of National and Regional DNA Data Banks, DNA Regulatory Board and elaborates on the requirement of consent before conducting such examinations. Through this paper, the author attempts to examine whether the current Bill, with all its provisions, is adequate to protect the privacy of an individual, and compare the same to international regulations and standards in this regard. The author also attempts to analyse the requirement of ensuring privacy vis a vis the surmounting cases at the Indian Judiciary, and the need for speedy delivery of justice to restore the trust of people on the Indian Judicial System.

Keywords: DNA Profiling Bill, DNA Technology (Use and Application) Regulation Bill, 2019, Forensic Science, privacy, Indian Judicial System.

RESEARCH OBJECTIVE

DNA Technology and profiling is an integral part of the Judicial system, particularly in cases of sexual offences and in determining maternity or paternity. However, the right to conduct DNA tests should not be unfettered and requires strict guidelines and regulations. The objective of conducting this research is to analyse the importance of enacting a statute to strike the right balance between the need to ensure that the information collected for DNA samples is strictly confidential. Moreover, it is also necessary to analyse the provisions under the act from the perspective of the right against self-incrimination and the scope of "consent" of the person whose samples are to be collected. At the same time, it is also essential to ensure that an innocent



man is not convicted and that the criminal is apprehended at the earliest. Thus, through this research paper, the researcher aims to analyse the scope of the DNA Profiling Bill, make certain recommendations for enacting a more balanced legislation to meet the conflicting needs of society.

RESEARCH METHODOLOGY

The researcher has chosen secondary sources of data collection as the primary method of research. The researcher/ author has primarily obtained information through various books, research papers and articles written on the subject. The researcher has comprehensively reviewed various Statutes which elaborate on the matter and provided an interpretation of the same. The researcher has concluded through an analysis of all the Statutes, interpretations by various jurists and International Courts and Tribunals of the topic and its allies under study.

The researcher has analysed the bare provisions of the Bill though the existing jurisprudence on the subject matter governing the same. The researcher has studied and analysed the constitutionality, the need and objective of the DNA Profiling Bill, 2019 and understand the reason for its failure to be made into a law despite several attempts. The researcher primarily aims to focus on the study of the possible infringement on privacy of the individual if the Bill is passed, and analyse the same in the light of the need to improve the conviction

rates of the Indian Judicial System. The researcher analyses the legal provisions of the Bill in the light of provisions under International Laws and those under provisions of other countries. The researcher concludes with certain suggestions and recommendations for a better law to be implemented at the earliest.

INTRODUCTION

Deoxyribonucleic Acid or DNA is a hereditary complex molecule, present in every cell in a multicellular organism, including humans. This structure was first identified in 1953 by James Watson and Francis Crick, who also won a Nobel Prize for the same later in 1962.¹ However, it was only in 1984 when British scientist, Sir Alec John Jeffrey conducted further research on DNA technology, leading to the modern-day DNA profiling technology.² These DNA molecules consist of two biopolymer strands, coiled around each other, to form a double helix, known as polynucleotides, which are further composed of simpler monomeric units, known as nucleotides.³ Thus, DNA contains all necessary information, including the biological information, necessary to build, maintain and identify an organism. DNA molecules are so unique that no two organisms, except identical twins, can have the same DNA. DNA profiling is the process through which these individual characteristics are determined to identify a person.⁴ It is based on proven scientific principles, and aims to advance social

¹ Peter H. Schuk, Multi-culturism Redux Science, Law and Politics, Yale Law and Policy Review (1994).

² Jeffreys, A.; Wilson, V.; Thein, S., Hypervariable 'minisatellite' regions in human DNA, (1985).

³ William Thompson, Simon Ford, Is DNA Fingerprinting Ready for the Court?, New Scientist, March 31, 1990.

⁴ Vol. 90, No. 2, Tracey, P.E. & Morgan, V., Big Brother and his Science kit: DNA databases for 21st



welfare, and hasten the Criminal Justice Delivery System by identifying the offender(s).⁵ DNA samples for the same may be extracted from saliva, hair, blood samples, nail scrapping or any other extract of a muscle or tissue of the body.⁶

Introduced in the Lok Sabha by the Mr. Harsh Vardhan, Hon'ble Minister for Science and Technology for the second time on July 8, 2019, the DNA Technology (Use and Application) Regulation Bill, 2019 or the DNA Profiling Bill, aims to regulate the use of DNA Technology to identify certain persons. This Bill had earlier been introduced in the August 2018 session of the Lok Sabha but could not be passed owing to the lapse of the session.

A large number of offences belong to that category of offence which affect the human body and property. This includes murder, rape, human trafficking, assault, battery, robbery, dacoity and grievous hurt. National Crime Records Bureau have recorded more than three lakhs crimes belonging to such categories, being committed in a year out of which a large number of perpetrators of such offences are not convicted due to lack of DNA testing and facilities to identify the criminal. Thus, the primary purpose of the

Bill appears to be to overcome this hurdle in the investigation of crime and in apprehending the criminal at the earliest.⁷

HISTORY AND BACKGROUND

India has been a land of profound medical research and advance medical technology dating back to 200 B.C. and 200 A.D.⁸ In 1911, the Indian Research Fund Association, later re-names as the Indian Council of Medical Research ["ICMR"] was founded by the Ministry of Health and Family Welfare to develop and foster a culture of research and infrastructure for community support.⁹ It was in 1980 that the ICMR first released a document for the establishment of Ethic Committees in all medical colleges and research centres. DNA was first admitted as evidence by the courts in India in 1985.¹⁰ By 1987, DNA fingerprinting was used as an instrument of criminal investigation to establish blood relations and to trace medical history. Investigators then began to find "anonymous DNA" or collect swabs of bodily substances found at crime scenes, and utilize technology to match the same with those of suspects. This provided authorities with a higher likelihood of ascertaining and apprehending the criminal. It also assisted

century crime control? , Journal of Criminal Law and Criminology, (2000).

⁵ Veeran v. Veeravarmalle & Anr., AIR 2009 Mad.64; Harjinder Kaur v. State of Punjab & Ors., 2013 (2) RCR (Criminal) 146.

⁶ Pandit, M.W. and Dr. Lalji Singh, DNA testing Evidence Act and Expert witness, Indian Police Journal, (December 2000).

⁷ Prof Elizabeth B. Ludwin King, A Conflict of Interests: Privacy, Truth and Compulsory DNA Testing for Argentina's Children of the Disappeared, (2011).

⁸ Chakrapanidatta Agnivesa, Charaka Samhita (Textbook of Medicine), ISBN-10: 1520277784,

(December 31, 2016) and Prof. G.D. Singhal & Colleagues, Sushruta Samhita (Textbook of Ancient Indian Surgery), (2015).

⁹ Kaye, D.H. & Sensabaugh, G.F., Reference guide on DNA evidence, Reference Manual on Scientific Evidence, second edition, (Federal Judicial Center, Washington DC 2000.)

¹⁰ Law Commission of India. Review of the Indian Evidence Act 1872. Pg. 43, (last accessed: March 9, 2020, 11:30), available at: <http://lawcommissionofindia.nic.in/reports/185thReport-PartII.pdf>.



law enforcement authorities by exonerating the innocent of criminal liability.¹¹

Over the years, several legislations have been enacted to regulate the interference of medicine with law and to ensure ethical practice of medicine and clinical research.¹² However, it was only in 2003 that an initiative to draft a bill to regulate the use of DNA samples in criminal jurisprudence and practice was undertaken. The Orissa High Court, in 2004 however, affirmed the validity of conducting DNA tests in criminal cases, to ascertain the involvement of the accused. However, the Court, in so determining, also made a perverse observation with respect to the refusal of the accused to cooperate resulting in an adverse interference being drawn against the accused.¹³

In 2005, the Indian Penal Code was amended to permit collection of medical details from the accused, at the time of arrest, if there exist “reasonable grounds for believing” that such medical examination will afford evidence for the commission of the offence.¹⁴ Thus, this provision was modified to include within its ambit, the examination of blood, semen, swabs in case of sexual offences, sputum, sweat, hair and fingerprints, through the use of modern and scientific technology, including DNA profiling and other such tests which the medical practitioner may deem necessary on a case-to-case basis.

It was only later that the Department of Biotechnology established a committee, known as the *DNA Profiling Advisory Committee*, which along with the Union Government, made recommendations for the drafting of the DNA Profiling Bill of 2006, which later came to be known as the Human DNA Profiling Bill, 2007. This Bill was primarily concerned with DNA fingerprinting and diagnostics. Although the draft of the Bill was made public in 2007, it was never introduced in either house of the Parliament owing to widespread criticism it drew amongst members of the civil society and several non-governmental organisations with respect to privacy concerns.¹⁵

The *A.P. Shah Committee Report* in 2012 suggested safeguards to prevent illegal collection and misuse of DNA data.¹⁶ It also recommended the mechanism of appeal under which citizens may request fresh samples to be collected after consent of the stakeholders are taken. It is also required that the purpose for which the data for DNA profiling is being collected is publicly stated where possible and the data be effectively destroyed once the purpose has been met.

The *Justice Malimath Committee*, through its report recommended amending Section 4 of the Identification of Prisoner’s Act, 1920 provide that any police officer investigating a case may request the Court of a Judicial Magistrate or a Judicial Metropolitan

¹¹ Kamrin T. MacKnight, *The Polymerase Chain Reaction (PCR): The Second Generation of DNA Analysis Methods Takes the Stand*, Santa Clara Computer and High Technology Law Journal, (2003).

¹² Drugs and Cosmetics Act, 1940, Medical Council of India Act, 1956 (Amended in 2002), Central Council for Medicine Act, 1970, Guidelines for exchange of Biological Material (MOH Order, 1997), Right to Information Act, 2005.

¹³ Thogorani Alias K. Damayanti v. State of Orissa and Ors, 2004 Cri. LJ 4003 (Ori).

¹⁴ Code of Criminal Procedure, S. 53 (1973).

¹⁵ Wilson Wall, *Genetics and DNA Technology Legal Aspects*, London Cavendish Publishing, (2002).

¹⁶ Report of the Group of Experts on Privacy (Chaired by Justice A.P. Shah, Former Chief Justice, Delhi High Court), (submitted to the Planning Commission on 16 October 2012).



Magistrate to obtain samples (including blood urine, fingerprints, handwriting etc) from any accused person. This will enable the authorities to conduct DNA testing for speedier delivery of justice. Another significant contribution of the Committee to DNA profiling is their recommendation to amend Section 293(4) of the Criminal Procedure Code to include DNA experts amongst other experts enlisted thereunder.¹⁷

Subsequently, in 2013, the Department of Biotechnology formulated another expert committee to resolve privacy concerns and finalise the text of the Bill. Yet, in 2015, the government was unable to table the Bill as planned during its monsoon session, owing to concerns over privacy and data security safeguards creating widespread panic amongst members of the society with respect to the Bill. Shortcomings in the earlier Bill with respect to identifying certain persons, including victims and suspects resulted in the “The Use and Regulation of DNA-Based Technology in Civil and Criminal Proceedings, Identification of Missing Persons and Human Remains Bill, 2016”, which was forwarded to the Law Commission for examination and recommendations.

In the 2016 Bill, a DNA Profiling Board was proposed to be constituted, consisting of experts in the field of molecular biology, human genetics, population biology, bioethics, social sciences, law and criminal justice experts to define standards and controls for DNA profiling. However, due to

criticism surrounding the Bill not effectively addressing the concerns of privacy of a large number of organisations, and any specifications for the funding of the Board, the stage in which samples can be collected and many more ambiguities, the Bill was sent back for re-drafting.¹⁸

PROVISIONS OF THE DNA PROFILING BILL, 2019

This Bill aims to permit DNA Testing only in certain matters as provided in the schedule attached to the Bill, which enlists offences under the Indian Penal Code as well as certain civil matters, including maternity-paternity, organ transplantation, surrogacy, immigration related suits and establishment of individual identity. The following are certain salient features of the bill.

A. CONSENT

The Act makes specific provisions for collection of DNA samples through bodily substances of the concerned person by the investigating authority after obtaining the consent of such a person. In case such a person has been arrested for an offence for which the stipulated punishment is less than seven years of imprisonment, the authorities are required to obtain written consent of such a person before obtaining the sample. For offences for which the stipulated punishment is greater than seven years, including life imprisonment and death penalty, *the consent of the arrested person is not required to be obtained by the investigating authorities for obtaining samples for DNA testing.* If the

¹⁷ Report of the Malimath Committee on Reforms of the Criminal Justice System: Some observations, ASA 20/025/2003, (19 September 2003).

¹⁸ Report No. 271, Law Commission of India, Human DNA Profiling- A draft Bill for the Use and

Regulation of DNA-Based Technology, (July 2017), available at: <http://lawcommissionofindia.nic.in/reports/Report271.pdf>.



person whose sample is required to be collected is a victim or a relative of a missing person, a minor or a disabled person, the investigating authorities are required to obtain the written consent of such a victim where it is available or that of the relative, parent or guardian of the minor child. If consent is not provided in such cases, the ***Magistrate has the power to order collection of bodily substances from such persons as samples for DNA testing.***

NATIONAL AND REGIONAL DNA DATA BANKS

Another interesting provision in the Bill is the provision for the establishment of a National DNA Data Bank along with Regional Data Banks in every State or two or more States. This is to ensure the maintenance of indices for (a) crime scene index; (b) “suspects” or “undertrials” index; (c) “offenders” index; (d) a missing persons index and; (e) an unknown deceased persons index. The repository of each of these indexes are to be prepared by the Regional DNA Laboratories and must be shared with the National Data Banks as well. The Bill also includes provisions for the entry, retention and removal of the DNA profile through certain regulations. For example, the DNA profile of a suspect may be removed if a police report is filed or a court order is given to that effect, and for the DNA profile of an undertrial to be removed, it is necessary to obtain a court order to that effect. However, the DNA samples of those persons who are not suspects, offenders, undertrials, missing persons or those from a crime scene may be removed on receiving a written request.

DNA REGULATORY BOARD

The Bill also includes provisions for the establishment of a DNA Regulatory Board to

supervise the DNA Data Banks and Laboratories. This Board is proposed to be chaired, ex-officio, by the Secretary of the Department of Biotechnology. Additionally, the Board is to comprise of other members who are experts in the field of biotechnology, and the Director General of National Investigation Agency and the Director of the Central Bureau of Investigation [CBI]. The Board is to advise governments on issues related to the establishment of DNA Laboratories or Data Banks and are also to be responsible for the accreditation to DNA laboratories. The Board must also ensure that all such information collected at Data Banks, laboratories and other such institutions with respect to DNA profiling is kept strictly confidential to prevent its misuse. Thus, it is clear that no DNA laboratory can function without an accreditation from the Board, which may also revoke the same for reasons including, but not confined to, failure to undertake DNA testing or failure to comply with the conditions of accreditation. The DNA laboratories are also required to follow standards to ensure quality in the collection, storage and analysis of DNA samples. The laboratories are required to return such biological samples collected to the investigating officer in case of a DNA profile conducted in criminal cases and destroy the sample in all other cases. Any such order of revocation of accreditation may be challenged through an appeal before the central government or any other authority notified by the central government.

OFFENCES UNDER THE ACT

The Bill also criminalises certain acts including, disclosure or use of DNA samples without authorisation, with a punishment of imprisonment for a period up to three years



and a fine of up to one lakh rupees.¹⁹ Even merely obtaining unauthorised information has been made an offence under the Bill.²⁰ The penalty for destruction, alteration, contamination or tampering with biological evidence is imprisonment for a term of up to five years which may also include a fine of up to two lakh rupees.²¹ The Bill also leaves scope of punishment against any individual acting in violation of or in contravention of any provision of the Bill where no specific punishment has been provided of imprisonment of up to two years with a fine of up to fifty thousand rupees.²² Another unique aspect of the Bill is its provision to penalise even a company or institution which commits an offence under the proposed Act.²³

INTERNATIONAL PERSPECTIVE

A. INTERNATIONAL TREATIES AND CONVENTIONS

The *International Society for Forensic Genetics* [“ISFG”] constituted a DNA Commission to issue strict guidelines and regulations with respect to DNA sampling and profiling to ensure that the privacy and human rights of an individual are not compromised with during the use and maintenance of DNA, particularly for

disaster victim identification.²⁴ The DNA Commission ensures strict regulations for accreditation of laboratories, and mandate that they must have a centralised electronic database for collection of samples. One of the basic guidelines issued in this regard is to ensure that the investigation and collection of the DNA samples are kept private and strictly confidential. Before collecting the sample, Forensic DNA Laboratories are mandated to inform the concerned officer and obtain the permission of the victim or their family members. The name of the officer on duty is to be specified. Further, it is mandatory that the process of DNA collection be streamlined to ensure the accuracy of the system and maintain clarity of the data collected, including the sample size and the results. However, it has also been maintained that DNA is not to be considered as the sole determinant of identifying an individual.²⁵

The *Universal Declaration of Human Rights*, adopted by the United Nations through a resolution passed by the General Assembly also ensures security of the rights of human beings against involuntary maltreatment.²⁶ The *International Covenant on Civil and Political Rights*, 1966 also ensures that no person be subject to scientific

¹⁹ Chapter VIII, The DNA Technology (Use and Application) Regulation Bill, 2019, Bill No. 128 of 2019.

²⁰ The DNA Technology (Use and Application) Regulation Bill, 2019, Bill No. 128 of 2019, Section 47.

²¹ The DNA Technology (Use and Application) Regulation Bill, 2019, Bill No. 128 of 2019, Section 49.

²² The DNA Technology (Use and Application) Regulation Bill, 2019, Bill No. 128 of 2019, Section 50.

²³ The DNA Technology (Use and Application) Regulation Bill, 2019, Bill No. 128 of 2019, Section 51.

²⁴ DNA Commission of the International Society for Forensic Genetics (ISFG) 6: Recommendations Regarding The Role Of Forensic Genetics For Disaster Victim Identification (DVI), FSI Genetics, Forensic Science International Genetics 1 (2000) 3-12.

²⁵ R. Lessig, C. Grundmann, F. Dahlmann, Tsunami 2004-A Review Of 1 Year Of Continuous Forensic Medical Work For Victim Identification, EXCLI J. 5 (2006) 128– 139.

²⁶ UN General Assembly, Universal Declaration of Human Rights, 10 December 1948, 217 A (III).



or medical treatment against their wish or consent.²⁷ It also enshrines the right against self-incrimination upon every person as one of the minimum guarantees.²⁸ Further, the General Comment, released by the Human Rights Committee, while interpreting the right to privacy noted that such a right is not absolute.²⁹

The *Declaration of Helsinki, 1964* is a unique international declaration, which set forth guidelines adopted by the 18th World Medical Association through a General Assembly, containing 32 principles, stressing on informed consent, confidentiality of data, vulnerable population, establishment of a protocol, mentioning scientific reasons for conducting the study and review by the Ethics Committee.³⁰

INTERNATIONAL STATE PRACTICE

Several countries have modelled their domestic legislations to comply with the stipulated guidelines and regulations aforementioned.³¹ Over 60 countries, including *United States*,³² *Argentina*,³³ *China and United Kingdom*, have now incorporated DNA technology to investigate criminal cases. In the *United Kingdom*, the Criminal Justice and Public Order Act, 1994

forms the basis for the creation of the National DNA Database. This act classifies certain offences to be 'recordable' and permits the police to obtain DNA samples, even without consent, from any person charged with such an offence. This legislation has also been upheld by the Court of Appeal, including the provisions for the preservation of fingerprints, bodily samples, and DNA profiling. Other statutes in the United Kingdom which regulate the collection and use of DNA profiling technology include the Police and Criminal Evidence Act, 1984, which also ensures that this sample is used only for the purpose of "prevention or detection of crime, the investigation of an offence or the conduct of a prosecution."³⁴ The Court also differentiated between self-incrimination and identification through DNA profiling by observing that the right against self-incrimination is not available to an accused in a criminal proceeding for information obtained through the use of compulsory powers, such as documents obtained under a warrant, breath, blood and urine sample and other materials used for DNA testing.³⁵

In certain other countries, such as *Netherlands, France, Germany and*

²⁷ UN General Assembly, International Covenant on Civil and Political Rights, 16 December 1966, United Nations, Treaty Series, vol. 999, p. 171.

²⁸ UN General Assembly, International Covenant on Civil and Political Rights, 16 December 1966, United Nations, Treaty Series, vol. 999, p. 171, Article 14(3)(g).

²⁹ UN Human Rights Committee (HRC), CCPR General Comment No. 16: Article 17 (Right to Privacy), The Right to Respect of Privacy, Family, Home and Correspondence, and Protection of Honour and Reputation, 8 April 1988.

³⁰ United Nations General Assembly, Sixty-Fourth Session, Right of everyone to the enjoyment of the

highest attainable standard of physical and mental health, A/64/272, 10 August 2009.

³¹ Schneider PM. Datenbankenmitgenetischen Merkmalen von Straftaftatern, Criminal DNA databases: data protection and security, 22:330-3, (Datenschutz und Datensicherheit, 1998).

³² Maryland v. King, 133 S. Ct. 1958 (2013).

³³ Prof Elizabeth B., Ludwin King, A Conflict of Interests: Privacy, Truth and Compulsory DNA Testing for Argentina's Children of the Disappeared, (2011).

³⁴ R (on the application of S) v. Chief Constable of South Yorkshire, (2003) 1 All ER 148.

³⁵ Saunders v. United Kingdom, (1997) 23 EHRR 313.



Austria, DNA profiling has only been made admissible in case of grave criminal offences.³⁶ In order to collect biological samples in such cases too, it is essential to obtain the permission of the court to conduct DNA profiling. They are generally accepted as corroborative evidence.³⁷ In China, the Ministry of Justice and Interior have been empowered to establish DNA Banks. Offenders and convicts of any sexual offence have to, mandatorily provide such samples, either voluntarily or on being compelled by the prosecutor. These samples are to be retained for a period of 10 years.³⁸

In *Canada*, DNA data banks have been established vide the DNA Identification Act, 2000. This Act also empowered judges to order convicts to provide blood and hair samples to the bank, respect the privacy of an individual and ensure safe collection of samples by authorised persons, only for legal purposes. The National Forensic Science Commission established thereunder is also responsible to maintain accuracy, security and confidentiality of the information and to ensure appropriate use and dissemination of DNA information. The constitutional validity of this legislation has also been upheld by the Canadian Supreme Court.³⁹ However, it has also been held that although unauthorised use of a person's body or bodily substances would amount to "compelled testimony", if the balance of probabilities demonstrate the

evidence being discovered through alternative non-constructive means, the admission of such bodily substances would not render the trial unfair.⁴⁰

REVIEW OF AVAILABLE LITERATURE

It is noteworthy that there are extremely few works of literature based on the DNA Profile Bill of 2019. However, the majority of available jurisprudence and writings are based on the previous versions of the Bill, which form the base of the draft in its present form.

The Council for Responsible Genetics, in its article entitled "*Overview and Concerns Regarding the Indian Draft DNA Profiling Act*" has examined the 2007 Draft of the DNA Profiling Bill.⁴¹ It has indicated the omission of the then draft to limit the power of the Board in terms of protecting the privacy of an individual. It also indicated the vague language used in the then draft to provide approval for laboratories and the lack of stringent measures to ensure maintenance of quality and standards of the laboratories. However, the present research paper is concerned with the 2019 draft of the Bill which seems to have taken at least some of the recommendations and criticism into account. As analysed, the Bill makes penal provisions for violations of the provisions of the Act. It also mentions certain criteria for

³⁶ Schneider PM. DNA databases for offender identification in Europe - the need for technical, legal and political harmonization, Proceedings of the 2nd European Symposium on Human Identification. Madison, WI, USA: Promega Corporation, (1998).

³⁷ Simpson v. Collinson, (1964) 1 All ER 262.

³⁸ Le Roux-Kemp, Andra., Forensic DNA Databases in Hong Kong and China: A BRICS Comparative Perspective, Indiana International & Comparative Law Review, 28, (2018) 221-242.

³⁹ R. v S.A.B, (2003) 2 SCR 678.

⁴⁰ R. v. Stillman, (1997) 1 SCR 6075.

⁴¹ Council for Responsible Genetics, Overview and Concerns Regarding the Indian Draft DNA Profiling Act, (last accessed on: 17 March 2020, 18:38), available at: http://www.genewatch.org/uploads/f03c6d66a9b354535738483c1c3d49e4/India_DNA_Bill_Memo_2.0.pdf



the accreditation of the laboratories and makes provisions for the removal of the same as a recognised laboratory. The Bill also makes specific provisions for the Budget allocation for the laboratories and DNA Data Bases.

Another significant contribution is the Thesis by Mr. Surendra Kumar, entitled “*Legal Status of Human Genetic Material– A Study Relating to Human DNA its Ethical Problems and Law.*”⁴² The thesis is a thematic analysis of the provisions of the 2018 Draft of the Bill. It provides an analysis of DNA from the purview of Indian criminal law, by taking into consideration the historical evolution of the provisions of the law along with the judicial pronouncements over the years. It also provides the scientific analysis of the concept of DNA and its importance to law and the criminal trial system. This thesis is extremely comprehensive and detailed and has also incorporated scientific mechanisms of conducting DNA tests. However, the present researcher is more concerned with the legal validity of the Bill and has thus, analysed the same through the legal lens in this research paper.

In the review article published in the Egyptian Journal of Forensic Science, entitled “*Current scenario of forensic DNA databases in or outside India and their relative risk*”, the criteria for inclusion and retention of doubts of efficiency and infringement of privacy as concerns with respect to personal data collection has been examined. This article particularly

concentrates on comparing the provisions in various other countries with respect to DNA profiling to the draft legislations of the Union Government in India. However, in the present research paper, the author attempts to analyse the draft Bill with special attention to Indian legislative provisions and judicial interpretations, while also comparing the same to provisions of other countries abroad.

CONSTITUTIONAL AND LEGAL ANALYSIS OF THE DNA PROFILING BILL, 2019

Article 51A (h) and (j) of the Constitution of India enshrine a duty upon every Indian citizen to “*develop the scientific temper, humanism and the spirit of inquiry and reform*” in order to strive to achieve excellence in all spheres of individual and collective activity. In order to analyse the DNA Profiling Bill, the interpretation of certain constitutional provisions is of paramount importance. This includes the power of the Parliament to enact such legislations, under *Entry 65 and 66 of the Union List*, the right against self-incrimination, enshrines under Article 20(3) of the Constitution, and right to privacy, as under Article 21 of the Constitution.

The *opinion of an expert based on DNA* profiling is relevant on the basis of “*facts bearing upon opinions of experts.*”⁴³ Further, a person accused of any sexual offence is to be examined by a medical practitioner, who may also take bodily substances from such an

⁴² Surendra Kumar, *Legal Status of Human Genetic Material– A Study Relating to Human DNA its Ethical Problems and Law*, A Thesis Submitted for the Award of Ph.D. degree of UNIVERSITY OF KOTA in the Faculty of Law, 2018, (last accessed on 18 March

2020, 19:02), available at: <https://www.uok.ac.in/notifications/Surendra%20Kumar%20Laww.pdf>.

⁴³ Indian Evidence Act, 1872, Section 46.



accused for DNA profiling.⁴⁴ The explanation to *Section 53 of the Code of Criminal Procedure* provides that the ‘examination’ specified under the Act includes the examination of blood, semen, sputum, swear, hair and finger nail clippings through the use of modern and scientific techniques, including DNA profiling and any other test deemed necessary by a registered medical practitioner in a particular case. Further, the Magistrate also has the power to order a person to give signature or handwriting specimens.⁴⁵

Perhaps one of the most elaborate judgment on *self-incrimination* is the decision rendered by an 11-judge bench of the Supreme Court in the case of *State of Bombay v. Kathi Kalu Oghad & Ors.*, in which it has been established that mechanical processes of producing documents in court which do not contain any statement of the accused based on his personal knowledge would not be covered within the ambit of self-incrimination.⁴⁶ Thus, it was held that although furnishing specimens of signatures or handwriting samples by an accused person would amount to furnishing evidence, it is not to be included within the expression of “being a witness” under Article 20(3) of the Constitution. Subsequently, the much-celebrated decision in the case of *Selvi v. State of Karnataka* held that involuntary administration of certain scientific tests, such as narco, polygraph examination and Brain

Electrical Activation Profile (BEAP) tests are of ‘testimonial character’ and therefore, barred under Article 20(3) of the Constitution. It has also been held that a Voice Spectrographic Test conducted without the consent of the person would not violate the rights of a person under Article 20(3).⁴⁷ As such, collection and retention of DNA samples have been held not to violate provisions of the Indian Constitution, although further use of DNA profiling technique for testimonial purpose could be challenged in the future.⁴⁸ Thus, it has been established by the Indian judiciary that samples obtained for DNA profiling and sampling are not violative of Article 20(3) if they are conducted in accordance with Section 153, 156 or 174 of the Criminal Procedure Code.⁴⁹

The *significance and importance of DNA testing* for the administration of justice has been recognised by the Supreme Court and it has been determined that a balance needs to be struck between the right to privacy of a person to not submit himself for forcible medical examination vis a vis the duty of the court to deliver justice at the earliest, and thus, the decision of whether a DNA test is needed must be determined on a case to case basis after careful consideration of the best interests of both the parties.⁵⁰ However, the Courts have generally taken a more or less consistent stand that DNA profiling is permissible under law, even in the absence of

⁴⁴ Code of Criminal Procedure (Amendment) Act, 2005, Section 53A.

⁴⁵ Code of Criminal Procedure (Amendment) Act, 2005, Section 311A.

⁴⁶ *State of Bombay v. Kathi Kalu Oghad & Ors.*, AIR 1961 SC 1808.

⁴⁷ *Ritesh Sinha v. State of U.P.*, 3 (2013) 2 SCC 357.

⁴⁸ *Murlidhar Meghraj v. State of Maharashtra*, AIR 1976 SC 1929; *Kisan Trimbak Kothula & Ors. v. State of Maharashtra*, AIR 1977 SC 435; *State of Maharashtra v. Natwarlal Damodardas Soni*, AIR 1980 SC 593.

⁴⁹ *D.J. Vaghela v. Kantibai Jethabai*, 1985 CriLJ 974.

⁵⁰ *Bhabani Prasad Jena v. Convenor Secretary, Orissa State Commission for Women*, AIR 2010 SC 2851.



Section 53A.⁵¹ Certain Courts have also permitted conducting medical tests, including potency and erectile dysfunction test,⁵² even without the consent of the accused, and have held that the refusal of the accused to undergo such tests grants liberty to the Court to draw adverse inference.⁵³

The most comprehensive guidelines with respect to collection of bodily substances for *paternity and maternity tests* were probably laid down in the Goutam Kundu case,⁵⁴ in which the Supreme Court held that Courts cannot order blood tests as a matter of course in India. It is only after establishing a case of strong prima facie case,⁵⁵ after careful scrutiny by the Court,⁵⁶ of non-access of husband to dispel presumption under Section 112 of the Evidence Act may the court permit conducting of the blood test.⁵⁷ Thus, all attempts must be made by the Court to avoid conducting the test, particularly to ensure that the legitimacy of the child is not put at peril.⁵⁸

The right to privacy, has been recognised to be one of the fundamental rights guaranteed within the ambit of right to life and liberty of Article 21 of the Constitution.⁵⁹ This includes

the right of human beings to be free from public scrutiny unless they act in an unlawful manner.⁶⁰ However, this right is not absolute and can be derogated from under exceptional circumstances, in case surveillance is in consonance with reasonable restrictions under statutory provisions.⁶¹ The right to privacy has been opined to be a right of man to assert directly and not derivatively, in an attempt to protect other interests.⁶² In the light of the aforementioned, the Courts have also developed a '*strict scrutiny*' test to show '*compelling State interest*' and demonstrate '*narrow tailoring*', that even while taking an action due to compelling interest, the infringement of individual rights takes place in the narrowest manner possible.⁶³

Another interesting intervention of the judiciary in the issue is when a non-governmental organisation filed a public interest litigation against the government due to the non-maintenance of a national DNA data-base, particularly in the light of a large number of unclaimed dead bodies reported annually. The Centre was told to take steps

⁵¹ Krishan Kumar Malik v. State of Haryana, (2011) 7 SCC 130

⁵² Naveen Krishna Bothireddy v. State of Telangana, 2017 (1) ALT (CrI.) 422 (A.P.); Leena Katiyar v. State of U.P. & Ors., 2017 Cri LJ 1911.

⁵³ Indian Evidence Act, 1872, Illustration (h), Section 114; Thogorani @ K Damyanti v. State of Orissa & Ors., 2004 CrI. LJ 4003; Sulabai v. Jagannath & Anr., 1972 Cr.LJ 1392; Venkateshwarulu v. Subbayya, AIR 1951 Mad 190; Subayya Gounder v. Bhopala, AIR 1959 Mad 396

⁵⁴ Goutam Kundu v. State of West Bengal, AIR 1993 SC 2295.

⁵⁵ Rohit Shekhar v. Narayan Dutt Tiwari & Ors, 2012 (2) RCR (CrI.) 889.

⁵⁶ Dharam Deo Yadav v. State of U P, (2014) 5 SCC 509; Dipanwita Roy v. Ronobroto Roy, (2015) 1 SCC 365.

⁵⁷ Kanti Devi v. Poshi Ram, AIR 2001 SC 2226.

⁵⁸ Nandlal Basudev Badwaik v. Lata Nandlal Badwaik, AIR 2014 SC 932.

⁵⁹ M P Sharma v. Satish Chandra, AIR 1954 SC 300; Kharak Singh v. State of Uttar Pradesh, AIR 1963 SC 1295;

⁶⁰ Ram Jethmalani v. Union of India, (2011) 8 SCC 1.

⁶¹ State of Maharashtra v. Madhukar Narayan Mardikar, AIR 1991 SC 207; Anuj Garg v. Hotel Association of India, AIR 2008 SC 663; Bhavesh Jayanti Lakhani v. State of Maharashtra, (2009) 9 SCC 551.

⁶² Charles Warren, Louis D. Brandeis, The Right to Privacy, 4 Harvard L.R. 193 (1890).

⁶³ Anuj Garg v. Hotel Association of India, AIR 1958 SC 538.



“*as expeditiously as possible*” to enact a legislation with respect to the same.⁶⁴

CRITICAL ANALYSIS

A legislation to regulate DNA profiling is required to balance two necessary considerations: the need for regulation of use of DNA based technology to assist judicial proceedings, particularly for the identification of accused, missing persons/victims and to prevent misuse or improper use of information obtained through DNA analysis, which may cause a serious violation of the privacy of an individual and also threaten the functioning of society as a whole.

The Department of Biotechnology along with the Law Commission have critically analysed and scrutinised several of the previous drafts of the Bill and in almost all of their observations, emphasised on the need to remove any scope of ambiguity and misuse of the law for a more robust legislature. Undoubtedly, the DNA Profiling Bill has catered to the needs of several stakeholders of the Indian jurisprudential system, particularly to those whom to whom DNA profiling would apply to, including missing persons, victims, offenders, under trials and unidentified deceased persons. The Bill also enlists certain standards to be maintained before and after accreditation of the laboratories. It also provides unique provisions for the removal of a laboratory from accreditation, punishment for non-compliance to with the provisions of the

proposed Act and provides for the establishment of National and Regional DNA Data Banks along with a Board responsible for regulating the use and collection of DNA.

As aforementioned, even the Courts have indicated the need for a robust statute in this regard at the earliest.⁶⁵ Moreover, even when the DNA report is produced, it is essential that the expert is called upon and examined in the Court to explain the report. The Court may also delve into the credentials of the expert in order to determine the reliability of the report.

However, a major risk for the establishment of a Board to regulate laboratories is that in the absence of a systematic protocol, there may be gross misuse of standards used in testing evidentiary samples. Moreover, there needs to be a more approachable and reliable body other than the Central Government, which may be authorised to hear matters regarding granting of accreditation to a laboratory or revocation thereof. There also needs to be a reliable system of performance appraisal and accreditation to dispense justice. DNA Identification has always been a powerful evidence against criminal defendants and given the technological advancements in the field, will continue to be so. Hence, it is necessary to make more stringent provisions regarding the prevention of misuse of the information and ensure there is a more stage-wise process laid down before DNA reports are submitted before the Courts. There should also be separate investigative wings and law and order wings to ensure fair trial and adjudication, without a coloured

⁶⁴ Lokniti Foundation v. Union of India & Ors, Writ Petition (C) No. 607 of 2016 decided on February 06, 2017.

⁶⁵ State of Uttarakhand and Ors. v. Akhtar Ali, MANU/UC/0918/2019; Mukesh and Anr. v. State for

NCT of Delhi and Ors., AIR 2017 SC 2161; State of Karnataka v. B. Y. Venkatesh, MANU/KA/7627/2019.



investigation. Thus, the National Police Commission may be established and incorporated within the structure for the desired result. The rank of the police official whose permission is required for “consent” to conduct the test as under the act must be so specified.

It is also of paramount Importance that the conditions stipulated under the Declaration of Helsinki be strictly followed, particularly that of informed consent required of the person who is being made to undergo the test. The Indian Medical Association is also a member of the World Medical Association, which is bound by the declaration.⁶⁶ Therefore, such conditions under the Declaration would be binding upon Indian practitioners as well. Additionally, the author also strongly believes that the system followed in France, Germany and Austria, where DNA samples are collected only in case of grave offences is practiced. Moreover, the importance attributed to the element of privacy as under the Canadian Statute must be incorporated in the Indian laws as well. False implantation of such DNA samples is extremely common in crimes committed in India. Hence, it is necessary that the consideration of privacy be given paramount importance, and the requirement of the use of DNA Technology be only made in case of grave offences, whose punishment is more than 7 years of rigorous imprisonment. Nonetheless, there is an urgent need for India to develop a strong statute in this regard which is long impending.

SUGGESTIONS AND CONCLUSION

⁶⁶ World Medical Association member list, (last accessed on: 01 April 2020, 14:25), available at: <http://www.wma.net/e/members/list.htm>.

DNA profiling is undoubtedly, one of the more reliable and established scientific technique for individual identification. The purpose for conducting such identification tests may range from disaster victim identification, to investigation of crimes, identification of missing persons, human remains and medical research purposes. Invariably, most countries have enacted comprehensive legislations for the collection, use and storage of DNA information and developed strict guidelines and regulations in this regard. Thus, it is apparent that DNA profiling is not just concerned with legal frameworks but also needs to be analysed from an ethical lens.

Any disclosure, either by misuse of information or unauthorised dissemination of information is a serious violation of privacy of an individual and may be prejudicial to their interests as well as the interest of the society at large. The Puttuswamy judgment has established that the right to privacy is much within the ambit of right to life under Article 21 of the Constitution, thus, putting to rest, the age-old academic debate. Over the years, several legislations have also been suitably amended, including the Code of Criminal Procedure, the Identification of Prisoners Act and the Indian Evidence Act to name a few. In most of these legislations, the provision regarding conducting medical examination, particularly collection of samples, has been made mandatory in case of sexual offences, at the discretion of a medical practitioner.

While the draft Bill has been prepared after careful consideration, and adopting recommendations of several law commission



reports, in order to ensure DNA profiling is conducted at stipulated laboratories for ensuring quality control and assurance, particularly of the report which may be admitted as corroborative evidence before the Courts. However, there is still some ambiguity left with respect to the scope of reliability of the reports prepared by experts under the Indian Evidence Act. This Bill is also a step forward towards scientific advancement and upgradation of the evidence presented before the Indian Judiciary. However, it is essential for the Bill to be passed at the earliest as has been done in more than 60 nations across the world for positive impact to be undertaken.

2. UN General Assembly, International Covenant on Civil and Political Rights, 16 December 1966, United Nations, Treaty Series, vol. 999, p. 171, Article 14(3)(g).
3. UN General Assembly, Universal Declaration of Human Rights, 10 December 1948, 217 A (III).
4. UN Human Rights Committee (HRC), CCPR General Comment No. 16: Article 17 (Right to Privacy), The Right to Respect of Privacy, Family, Home and Correspondence, and Protection of Honour and Reputation, 8 April 1988.
5. United Nations General Assembly, Sixty-Fourth Session, Right of everyone to the enjoyment of the highest attainable standard of physical and mental health, A/64/272, 10 August 2009.

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11. The Identification of Prisoners Act, (1920)

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