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A Critical Analysis of DNA Technology (Use and Application) Regulation Bill, 2019

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ABSTRACT

DNA fingerprinting is almost an infallible technique in identifying individuals which has the potential to revolutionize the Indian criminal justice system. However, neither the Indian Evidence Act nor the Code of Criminal Procedure specifically mentions the DNA test, making it difficult for law enforcement agencies to rely on DNA evidence. As a result, crime rates have risen exponentially in recent years, but the crime-solving techniques used by law enforcement agencies remain conventional with little or no aid to forensic science. A lack of knowledge and understanding of the forensic process also leads to the accumulation of cases and the exoneration of criminals. To address this legal lacuna, the parliament has drafted a Bill on The DNA Technology (Use and Application) Regulation Bill, 2019 (hereinafter referred to as "Bill") with the main objective of identifying persons relevant as per the schedule appended to the Bill with the help of DNA profiling and also to substantiate the legal proceedings. The Bill also provides for the establishment of a DNA Database at the national and the regional level and a DNA Regulatory Board that entrusts with the responsibility of supervising DNA Data Banks and DNA Laboratories. The Bill, however, has not yet been passed by the parliament due to several legal concerns. Thus, the researcher decides to undertake the present research to examine the admissibility of DNA evidence on the benchmark of fundamental rights and also to address the shortcomings of the Bill.

Keywords: DNA, Fundamental Rights, privacy, Data bank, DNA Bill, DNA Evidence.

I. INTRODUCTION

As enshrined in the Universal Declaration of Human Rights², individual freedom and liberty without any fear and want are imperative for every egalitarian society. To achieve this goal, our Constitution through its various Articles strives to provide us with many fundamental freedoms so that every individual can enjoy their civil and political rights to the fullest. However, crimes are a necessary violation of these freedoms. India is a country that consists of a heterogeneous population with glaring problems of unemployment, poverty, illiteracy, etc., it is but inevitable

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² Universal Declaration Of Human Rights, Preamble, <https://www.Un.Org/En/About-Us/Universal-Declaration-Of-Human-Rights> (last visited Nov 6, 2022)

that the crime rates are increasing exponentially whereas crime-solving techniques used by our investigative agencies are still conventional with little or no aid to forensic science. Adding to this, our judicial system is also struggling with the shortage of forensic lawyers and judges. A lack of knowledge and understanding of the forensic process leads to the accumulation of criminal cases and the exoneration of criminals. If we have to create an environment conducive to our harmonious development, we must mitigate crime rates by strengthening the foundation of law related to forensic science. Hence, using forensic techniques in investigation and trial is an absolute necessity of today's world, and DNA fingerprinting is one such technique that is extensively used in other nations to incriminate criminals. Therefore, it is necessary for the government also to develop a robust system that leads to the speedy administration of justice, making the use of DNA technology indispensable in the Criminal Justice System. As a result, the Government of India has introduced a Bill "The DNA Technology (Use and Application) Regulation Bill, 2019³" to aid speedy determination of civil and criminal cases. The objective of the Bill is to identify certain categories of persons including offenders, suspects, victims, under-trials, unknown deceased persons and missing persons with the help of DNA profiling. It further provides for the establishment of a DNA Regulatory Board, accreditation of DNA laboratories, and establishment of DNA Data Banks where the DNA profiles of the aforementioned individuals can be retained.

II. WHAT IS DNA?

DNA, being a very powerful tool for identification, is made up of double-stranded long molecules, designed in such a way that they make up a double helix structure in which two strands are twisted together. Adenine, Thymine, Cytosine, and Guanine are four types of bases or nucleotides which are the building blocks or connectors of each such strand. Each base has a specific mutual attraction with the other base, for example, thymine in one strand attracts only with adenine of the other strand forming a T-A pair. Similarly, cytosine only attracts with guanine forming a C-G pair. Such pairs allow the identification easily as they are unique to every individual constituting a genetic code of that individual. Through this genetic code, one can easily recognize the visible as well as invisible characteristics of the individual by using the technique of DNA profiling wherein not only the characteristics like race, colour, sex, etc can be investigated but also hidden characteristics like a person's blood group and susceptibility to

³ The DNA Technology (Use And Application) Regulation Bill, 2019, <https://prsindia.org/billtrack/the-dna-technology-use-and-application-regulation-bill-2019> (last visited Nov 7, 2022)

a disease can also be known.⁴ It is important to highlight that each individual's DNA is unique, and so the DNA technology allows medical research to precisely establish the identity of an individual with minimal likelihood of discrepancy in the findings.⁵

III. DNA AS EVIDENCE

To understand DNA as evidence, it is better to first appreciate the Locard Exchange Principle. According to this principle, an exchange or physical transfer occurs whenever two people come into contact with each other. So there can be a physical transfer of skin cells, hair, clothing fibers, pollen, make-up, or any other materials. To a forensic examiner, such evidence is called trace evidence. These shards of evidence provide a silent witness to the crime, which aids the investigation. Dr Locard believes that no matter where a criminal goes or what a criminal does, he will leave something behind at the scene of the crime, for example- fingerprints, footprints, hair, skin cells, blood, bodily fluids, pieces of clothing, etc. and simultaneously, he will also take something back with him, for example, dirt, hair, pollen, or any other type of trace evidence⁶. Further, being trace evidence, DNA may be collected from a wide variety of sources, like hair, cigarette butts, blood, razor clippings, or saliva, making it easier to track down the criminals.⁷ Also, as no two persons carry the same DNA with a rare exception in the case of identical twins, this peculiarity of DNA makes it cogent evidence, and as a result, the court bestowed high reliability on it.

DNA extracted from the sample collected at the crime scene may result into two possibilities. It either connects a suspect that confirms his role in the crime, or it might eliminate a suspect from suspicion. In a sexual assault case, for example, the samples such as hair, skin cells, semen or blood, etc. left over at the crime scene should be properly preserved and thereafter matched with the DNA extracted from the known sample of a suspect. Such matching either covert him into an accused or cleared him from suspicion. In addition, even if there is no suspect available in the case, then also if the concerned government maintains a DNA Database, the DNA sample retrieved from the crime scene may be entered into such database to identify the suspect by having a match with the DNA profile already stored in the Database⁸.

⁴ Dr. Sarla Gupta and Beni Prasad Agarwal, *DNA Test in Criminal & Paternity Disputes (Scientific Investigation & Trial) 1* (Premier Publishing Company, 1st Edn, 2019)

⁵ DNA Fingerprinting, <https://www.genome.gov/genetics-glossary/dna-fingerprinting> (last visited Nov 10, 2022)

⁶ Toward Locard's Exchange Principle: Recent Developments In Forensic Trace Evidence Analysis', <https://nij.ojp.gov/library/publications/toward-locards-exchange-principle-recent-developments-forensic-trace-evidence> (last visited Nov 19, 2022)

⁷ Understanding DNA evidence: A Guide for victim service provider, <https://www.ojp.gov/pdffiles1/nij/bc000657.pdf> (last visited Nov 19, 2022)

⁸ Supra note 6

IV. IMPORTANT CHARACTERISTICS OF DNA BILL

1. The objective of the Bill is to regulate DNA technology primarily for the identification of persons relevant as per the schedule appended to the Bill. The schedule includes Criminal matters like the Indian Penal Code, Offences under the Medical Termination of Pregnancy Act, 1971, the Motor Vehicle Act, the Domestic Violence Act, Protection of Civil Rights Act, 1955. It also includes civil matters such as Parentage disputes, Migration disputes, Transplantation of human organs, Pedigree issues, and other cases as well which include Medical negligence cases, Identification of deceased persons, and abandoned children. The main highlights of the Bill are as follows⁹:

2. Consent for collection of sample

As per clause 21 of the Bill, no consent is required in the cases where the person is punished with imprisonment of more than 7 years, imprisonment of life, or death sentence (Specified offences). In other cases, written consent of the person concerned is mandatory. Further, if the person is a victim or a relative of a missing person or a minor or a disabled person, the authority must obtain written consent from such victim, relative, parent, or guardian of such minor or disabled person. In circumstances where consent is withheld, a magistrate can be approached, who can issue an order for the taking of bodily samples of such person.

3. DNA data bank

According to the mandate of clause 25 of the Bill, national and regional data banks must be established at the national and state level respectively. The function of the Data Bank is to retain DNA profiles in various indices based on the types of data received from the DNA Laboratories. These indices are:

- a. Crime Scene index
- b. A suspects or under-trials index
- c. An offender index
- d. A missing person index
- e. An unknown deceased person index

4. Removal of DNA data

The criteria for admission, retention, and removal of DNA profiles shall be governed by the rules. However, the Bill allows the removal of specific DNA profiles under Clause 31 in the

⁹ Supra note 2

following cases:

- a. Of a suspect - when the police report is filed or on the order of the Court
- b. Of an under-trial- on the order of the court
- c. Persons who are not suspect, offenders, or under trial - their profile can be removed from the Crime Scene index or missing person index on their written request.

The profile of a person convicted of an offence is to be retained infinitely.

5. DNA regulatory board and its functions

The following are the broad functions of the Board given in clause 12 of the Bill:

- a. Advising the government on all issues concerning DNA Laboratories and DNA Data Bank,
- b. Grant accreditation to the DNA Laboratories, and
- c. To protect privacy, that is, to ensure the confidentiality of all DNA information retained by DNA Laboratories, DNA Data Banks, or any other authorized person.

6. Accreditation of DNA laboratories

All DNA testing laboratories must obtain accreditation from the DNA regulatory Board. Such Laboratories are entrusted with the responsibility of following the stringent quality control measures in the collection, storing, and analysis of DNA samples. Accreditation granted shall be valid only for two years until revoked at any time earlier. The reason for revocation of accreditation may be the failure to conduct DNA testing or failure to comply with the terms and conditions attached to the accreditation. After sharing DNA information with DNA Data Banks, biological samples must be returned by the DNA Laboratories to the Investigating officer.

7. Offences under the bill

- a. Anyone who reveals any information contained in DNA Data Banks without authorization shall suffer imprisonment which may extend to three years and a fine of up to one lakh rupees.
- b. Anyone who uses DNA samples or DNA findings without authority shall face a punishment which may extend to three years and a fine up to one lakh rupees
- c. Anyone who unlawfully gains access to the information in the DNA Data Bank shall be punished with imprisonment which may extend to two years and a fine of up to Fifty Thousand Rupees.

- d. The penalty for unlawful destruction, alteration, contamination, or tampering with biological evidence may extend up to 5 years of imprisonment and a fine of up to Two Lakhs Rupees.
- e. In case of a contravention of any provision where no penalty is provided shall be punishable with imprisonment which may extend to two years and a fine of up to Fifty Thousand Rupees.

V. LANDMARK JUDGMENTS DEALING WITH DNA EVIDENCE

The introduction of DNA Bill is squarely criticized by the human rights activists for violating the fundamental right to privacy under Article 21 and for defeating the right against self-incrimination enshrined under Article 20(3). No doubt that various judicial pronouncements under these articles create a widespread uncertainty and therefore, it is necessary to examine the landmark judgments to test DNA legislation on the touchstone of the right to privacy and the right against self-incrimination.

(A) Article 20 (3) - right against self-incrimination

The legal maxim "*nemo tenetur prodre accusare seipsum*" served as a privilege against self-incrimination and is based on the right to silence¹⁰. The expression of this legal maxim is explicitly found in Article 20(3) of the Constitution of India which states that "no person accused of any offence shall be compelled to be a witness against himself". Therefore, No undue constraint can be imposed on the accused in order to extract a confession, but a valid question that might be asked is whether such a prohibition applies to all evidences supplied by the accused or simply to evidences given by the accused because of his personal knowledge. The Supreme Court in the State of Bombay vs. Kathi Kalu Oghad¹¹ defines the scope of Article 20(3) wherein the eleven-judge bench has categorically explained the difference between the evidence in the nature of "personal testimony" and "evidence which is not based on the knowledge of the accused". The Supreme Court observed that the prohibition of Article 20(3) can validly be applied to all evidences that are based upon the personal testimony of the accused thereby depending on his volition. He has the freedom to make any such statement or may remain silent over it. But there are facts which despite his best efforts to conceal the nature by dissimulation, he cannot change its intrinsic characteristics such as his fingerprints or handwriting expression. Therefore, such facts that are not based on the personal knowledge of the accused cannot be included under the phrase "to be a witness against himself" and are

¹⁰ State of U. P. vs. Deoman Upadhyaya, AIR (1960) SC 1125

¹¹ The State Of Bombay Vs Kathi Kalu Oghad, AIR 1961 SC 1808

allowed to be given in evidence.

The Supreme Court has reiterated the ratio in *Selvi vs. State of Karnataka*¹² whereby the Court ruled that DNA is a critical tool for connecting a suspect to a crime. The Court observed that furnishing samples such as fingerprints does not amount to a testimonial act under Article 20(3). Hence, collection of bodily samples for extracting DNA is like any physical evidence and is not barred by Article 20 (3).

(B) Article 21 - right to privacy

Article 21 of the Constitution provides that "no person shall be deprived of his life and personal liberty except according to the procedure established by law". Article 21 is of the widest amplitude encompassing within itself the plethora of human rights. It exploded a whole new world of human rights jurisprudence to achieve the goal of an egalitarian society. It is also perceived that most of the sustainable goals¹³ are achieved through the medium of Article 21. One such goal is "peace, justice, and strong institutions". So, to maintain peace, the right to privacy must be guaranteed to every individual, so that no one may trespass into his private space. This duty is cast not only upon the state but also upon the non-state actors. However, in the same goal, the word "justice" is also mentioned which not only imbued in it an environment free from crime but is also inherent of the notion of speedy justice. In this new age of technological advancement, one cannot imagine speedy justice without using technology. As a result, with speedy justice and strong institutions in mind, the Parliament has drafted a Bill of 2019 in which the government intends to build a DNA Database to provide quick dispensation of justice to victims by cutting short the time wasted in tedious investigations and lingering trials. However, while advocating for speedy justice and a powerful institution, "peace" must not be overlooked. Therefore, the Supreme Court serve as the check and balance on the other branches of the government, granting every individual the right to privacy as a Fundamental Right, and the parliament is now duty bound to enact laws that confirms to the letter and spirit of the decision of the Supreme Court relating to the right to privacy.

The Supreme Court, in *Justice K.S Puttaswamy (Retd.) vs. UOI*,¹⁴ upheld the right to privacy as a fundamental right enshrined under Article 21 of the Constitution. The Court observed that privacy not only includes the right to be left alone but also encompasses within itself all personal intimacies including the sanctity of family life, marriage, procreation, home, and sexual

¹² *Selvi And Ors V. State Of Karnataka*, Criminal Appeal No. 1267 Of 2004

¹³ What Are The Sustainable Development Goals?, <https://www.undp.org/sustainable-development-goals> (last visited Dec 2, 2022)

¹⁴ (2017) 10 SCC 1

orientation. However, the legitimate expectation of privacy may fluctuate, but it is worth noting that privacy is inherent in every individual, whether he is in a public or private arena. As an integral part of an individual's dignity, the right to privacy must be protected under Article 21 of the Constitution.

The Court further observed that the right to privacy has both negative and positive connotations. Restraining the State from intruding on the life and personal liberty is a part of negative content whereas imposing an obligation on the State to take all necessary measures to protect privacy is the facet of the positive content. In this digital age, the information privacy is an integral aspect of privacy and therefore, the state is duty-bound not only to protect privacy from state actors but also to restrict non-state actors to violate anyone's privacy. Hence, a need of a robust regime for Data protection is imperative. The Court also observed that the state while creating such a regime must appreciate the sensitive balance between individual interest and legitimate concerns of the State. The legitimate concerns include the protection of national security, investigating and preventing crimes, encouraging innovation, etc. These policy matters may be considered by the Government while drafting a regime to protect privacy.

The Supreme Court further observed that like any other right, the right to privacy is also not absolute and is subjected to reasonable restriction. Therefore, any law that encroaches upon the privacy of the individual has to withstand the test of proportionality. Under Article 21, any encroachment would be justified only when such law stipulates a procedure that is fair, just, and reasonable. The Supreme Court establishes a triple test for every law that seeks to infringe privacy.

- a) Legality, which postulates the existence of law;
- b) Need, defined in terms of legitimate state aims; and
- c) Proportionality, which ensures a rational nexus between the objects and the means adopted to achieve them.

Besides the "strict scrutiny test" as laid down by the Supreme Court in *Anuj Garg vs. Hotel Associations of India*¹⁵ to test the "compelling state interest", the Supreme Court in the above case observed that such a test is only an aspect of such compelling state interest. However, to maintain the delicate balance between larger social interest and the fundamental right of the individual, the state must demonstrate that it has followed a narrow tailoring approach that is it must satisfy the Court that while impinging upon the privacy of an individual, it has adopted

¹⁵ *Anuj Garg Vs. Hotel Associations Of India*, Appeal (Civil) 5657 Of 2007

that method which will infringe the right to privacy in the narrowest possible manner¹⁶. However, whether the DNA Bill of 2019 satisfies the litmus test of proportionality as provided by the Supreme Court is discussed below in the topic of "Shortcomings of the Bill".

On the significance of DNA testing in the administration of the justice, the Supreme Court in *Bhabani Prasad Jena vs. Convener Secretary, Orissa State Commission for women*¹⁷ observed that, in order to resolve the conflicting position between a person's right to privacy and the Court's concerns about reaching the truth, the Court must balance the interests of the parties while exercising judicial discretion, and if the Court finds that DNA testing is eminently necessary for a just decision of the case, it may order such testing.

VI. SHORTCOMINGS OF THE BILL

DNA involves critical information that every individual has the right to preserve. The Parliament has drafted the Bill which has the purpose of collecting and storing DNA profiles digitally for the identification of the individuals in civil and criminal matters. Though the Bill has legitimate purpose of identifying individuals but the same is failed on the test of proportionality as discussed below.

1. Codis loci system

The Law Commission in its 271st report¹⁸ on "Human DNA Profiling - A Draft Bill For The Use And Regulation Of DNA-Based Technology" advocated a 13 Loci CODIS system that only allows for identification of the person concerned. The Bill, however, is silent on the same, allowing the accessing of more information than the mere identification. Though Clause 33 specifically states that DNA information shall only be used for identifying individuals, the same is akin to that of a toothless tiger as the Bill imposes no penalties even if the officials violates this provision, rendering the provision merely advisory. Therefore, accessing of highly sensitive information with no objective fails to satisfy the test of proportionality and thereby violates the right to privacy of the citizens.

2. Inclusion of undertrials and suspects

Even though the conviction rates of under-trials are abysmally low, still the indefinite retention of their DNA profiles under clause 31(2) of the Bill subjecting it to the removal only on the orders of the court is a sheer violation of their privacy rights. Further, retaining the profiles of suspects is criticized on the grounds that in cases of blind crimes or riot situations, everyone

¹⁶ Supra note 13

¹⁷ Civil Appeal Nos. 6222-6223 of 2010

¹⁸ Law Commission Of India, https://lawcommissionofindia.nic.in/report_twentyfirst/ (last visited Nov 8, 2022)

tends to be the suspect, allowing the police to misuse its power by retaining the large numbers of profiles unnecessarily, infringing upon the privacy rights and dignity of individuals¹⁹. Also, if the individual present at the crime scene is a witness rather than a suspect, his profile may be retained unnecessarily in the suspect's index in the absence of the witness index.

3. No separation of civil and criminal DNA database

DNA Data Banks are created under different indices but as such, there is no division in Databanks on the basis of civil and criminal cases. Therefore, if a person agrees to the retention of his data in civil matters in the DNA Data Bank, he will be subjected to unnecessary criminal investigative searches in which he does not wish to participate, thereby infringing his dignity and privacy rights. This will also put him at a disadvantage in comparison to others who have not agreed to provide a sample for the DNA Database.

4. Issue with consent

As per clause 21(1) of the Bill, no consent is required in the cases where the offence is punished with death, or imprisonment of life or imprisonment for more than seven years whereas consent is mandatory in the cases where the offence is punishable with less than seven years. However, if a person refuses to consent to the collection of his bodily sample, the investigating officer can still circumvent his consent by presenting an application to the magistrate, who at his discretion can thereby permit the investigating officer to take the sample. This has the effect of making the consent perfunctory as there are no guidelines provided in the Bill as to when the magistrate can override the consent. Moreover, under Clause 21, no safeguards are provided in the cases of juveniles who are in conflict with the law.

5. Removal of profiles

A cursory reading of the Bill reveals that removing the profile from the DNA Data Bank is a challenging task. The Bill provides for the infinite retention of the DNA profiles of Convicts under clause 31(1) without any objective, which violates Article 8 of the European Convention on Human Rights.²⁰ Further, in the case of other indices, the onus is on the individual to apply for the removal of DNA profiles. Moreover, if a person applies, the Board has an absolute discretion not to delete the profile, with no opportunity to appeal, and even if the profile is removed, then there is no provision to verify the same. Therefore, putting the onus on the

¹⁹ Sobhana K Nair, "Collection Of DNA Samples Will Lead To Misuse, Says Former Supreme Court Judge Madan Lokur", *The Hindu* (February 03, 2021, 7:12 PM), <https://www.thehindu.com/news/national/lokur-raises-queries-over-dna-samples-collection-from-suspects/article33741327.ece>

²⁰ European Convention On Human Rights, https://www.echr.coe.int/Documents/Convention_Eng.Pdf (last visited Dec 7, 2022)

individual and granting absolute discretion to the Board in cases of removal of profiles with no guidelines fails to satisfy the litmus test of proportionality.

6. No data protection law

To provide effective privacy protection, an autonomous and independent Data Protection Authority charged with the remedial process must be established, which can only be accomplished through the adoption of the Data Protection Law. Therefore, before adopting this law, it must be ensured that data protection legislation is enacted and executed to protect the right to privacy of the citizens by establishing a grievance redressal mechanism.

7. Confusion on witness DNA profile

Confusion arises under clause 22(1) when the witness has voluntarily consented to furnish his DNA information. The objective of the collection and retaining of witness profiles is unclear. Further, uncertainty exists over its retention in which index, as if it is retained in the crime scene index, then such individual would be at a disadvantage because his sample would not only be retained forever but also he would be subjected to unnecessary crime investigation searches. Hence, the absence of witness index infringes the dignity and privacy of the witness by compelling him to store his DNA profile in other indices without any legitimate purpose.

8. Offences under the bill

One can clearly see the large disparity between the offence committed and the sentence imposed. It is absurd to award a penalty of up to three years in prison and a fine of up to one lakh rupees in circumstances where the offence has a significant socio-economic impact and posed danger to national security. Further, addition of the phrase "negligently" under Chapter 8 also allows the perpetrator to misuse the DNA data while being easily exonerated from the clutches of the law.

VII. CONCLUSION

The DNA Bill, without a doubt, has an enhanced outcome in the criminal justice system and will expedite the efficiency of criminal justice by minimizing the time lost in strictly following traditional techniques in investigation and trial. However, DNA containing the genetic code considered to be the most personal property of an individual is used as a means to execute this law, and therefore, some concerns over the privacy of the individuals have been raised by the legal experts. Several legal lacunae in the Bill also demonstrated the genuineness of these concerns and hence, the bill must be revised before it enacted into a law in order to protect the fundamental right to privacy of the individuals. The Government, therefore, is duty-bound not

to impinge on the privacy of individuals, and even if it tries to transcend, it must follow the principles laid down by the Supreme Court in its various landmark judgments.
