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Effectiveness of DNA Profiling with special reference to DNA Technology (Use and Application) Regulation Bill, 2019

Dr. Belu Gupta Arora[1]

ABSTRACT

Before the dawn of the twentieth century, the role played by one complicated molecule in the shape of all living things was one of nature's best kept secrets. Who could imagine that a molecule known as DNA was a great architect of life? Or that Ribonucleic Acid (RNA) might act as its messenger.[2] *The discovery of DNA fingerprinting revolutionised criminal identification and forensic science. Just like ink fingerprints, DNA fingerprints are unique to every individual and can be used as legal evidence in court to prosecute or defend alleged criminals. In paternity cases, DNA fingerprinting technology can be used to identify or rule out persons as biological parents of a child. However, the development of this technology has given rise to a number of ethical debates including whether a person can be forced to give a DNA sample for analysis and who should gain access to such personal information. Also, the concept of a DNA database raises questions about personal privacy and civil rights, although it could be a key contributor to genetic research. Scientists are consistently finding that DNA Technology has become an important tool in the investigation process since the inception of the technology throughout the world. Since this technology has left a profound impact on the administration of justice and various countries of the world has adopted this technology and to adopt this new science in the legal system, have either changed or amended their existing laws and some countries have even introduced new special DNA legislations for maintaining proper balance between some human rights of the persons involved in criminal cases and the need of DNA evidence for the interest of justice and social security.*[3]

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[2] Jyotirmoy Adhikary, ***DNA Technology in Administration of Justice***, Lexis Nexis Butterworths, New Delhi, 2007, p.20

[3] Ibid at p.52

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INTRODUCTION

In the 21st century the crime scenario has become very complex. Thus, it is essential to use science and technology in apprehending the criminals. The development of DNA technology contributes in the search for truth by helping police and prosecutors in the fight against violent crime. DNA technology is gaining importance in the administration of Justice in any form of society and in any part of the world and it cannot be denied also. With reference to India there is no adequate legislation enacted by the Government on DNA technology. It is imperative to incorporate DNA technology in an Indian Legislation or to draft an exclusive independent enactment on the use of DNA technology in Indian Courts. DNA technology has rapidly gained an important place in the justice system of the countries of the world and since its inception it is serving the justice system both in civil and criminal matters very effectively.

Since the DNA technology has become an important part in the administration of justice , hence there is a need to improve and streamline the existing laws and other improvements are much needed to be made in order to make the existing technology better and, more promising ways are to be carved out in which the applications of DNA can be expanded.

What is DNA?

The human body is composed of innumerable cells, each one of which carries a complete set of chromosomes. In every cell, there are a number of components like ribosome, Golgi's bodies etc. and every cell, except red blood cells and few other minor types, contain within it a structure or component called nucleus. Within the nucleus of each cell resides an identical copy of the individual's genetic material known as DNA which is the abbreviation of deoxyribonucleic acid.[4] DNA is present in white corpuscles. It is the structural material of chromosomes. It carries the

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[4] Modi's, ***Medical Jurisprudence and Toxicology***, 22nd Edn., Lexis Nexis Butterworths, p. 196 quoted in Jyotirmoy Adhikary, ***DNA Technology in Administration of Justice***, Lexis Nexis Butterworths, New Delhi, 2007, p.21

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genetic code. It is the fundamental building block for an individual's entire genetic makeup. It is the component of virtually every cell in the human body. A person's DNA is the same in every cell. For example, the DNA in a man's blood is the same as the DNA in his skin cells, semen and saliva.[5]

Scope of DNA Technology

DNA is found in all bodily fluids and tissues. In fact, it is present in every single cell, and each cell has identical DNA. Because of this, DNA evidence collected from the crime scene can be used like a finger print to include or exclude a suspect in particular case. It can also be used to link crime scenes either locally or on a state or national evil. In other words, DNA evidence has generally been used to confirm the identity of someone already under suspicion, rather than assisting in the investigation and identification.[6]

Actually, as science and technology developed and expanded the scope of scientific research, they began to be more extensively used in revealing, fixation and examining the material traces of crimes. It may be noted that earlier the forensic science had also a very important role to play in linking a suspect with the scene of crime. But, nowadays, especially after the emergence of DNA Technology as a latest method of forensic science, it provides tremendous amount of information to the investigating officers that will enable him to find the criminal purely from evidence which he has left at the scene of crime.[7] DNA technology with the advancement of the science is proving very helpful to the justice system of the country and its scope is getting widened in respect of administration of justice whether it is civil or criminal.

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[5] Alex Samuel and Swati Parikh, ***DNA Tests in Criminal Investigation and Paternity Disputes***, Dwivedi and Co., Allahabad, 2009, p.5

[6] Alex Samuel and Swati Parikh, ***DNA Tests in Criminal Investigation and Paternity Disputes***, Dwivedi and Co., Allahabad, 2009, p.6

[7] L, Moldofsky, ***Foolproof Fingerprints: On their DNA Marks***, Time Magazine, 24 April 2000, p.47 quoted in Jyotirmoy Adhikary, ***DNA Technology in Administration of Justice***, Lexis Nexis Butterworths, New Delhi, 2007, p.15

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DNA Technology as a Tool

The evolution of DNA technology as the latest method of forensic science is the outcome of tremendous development of genetic science which upheld the belief, based on objective experimental knowledge that the pattern of chemical signals, i.e., 'genetic code' which is discovered within the DNA molecule in the cells of each individual and as such the chemical structure of DNA in the body of each individual is the sole determining factor to identify one separately from others, except the 'Genetically Identical Twins'.[8]

The discovery of DNA technology has reduced the burden of the crime investigators because the scientific evidence is much speedier, specific, accurate and conclusive than any other human evidence and can stand the scrutiny of the court to determine the guilt or innocence of an accused.

Thus the scope of the DNA Technology is very wide and it is the best tool available to the justice system and helps it in reaching the best possible decision.

Modern day biology is seeking new and better ways to enhance our quality of life through application of technology (bio-technology) and rapid process in search of human genome.[9] Forensic Science has a great contribution for crime detection and investigations and its application in the crime investigation process is indispensable in view of rising crime in the new millennium.[10] The discovery of the structure of the DNA[11] (Deoxyribonucleic Acid) in the 1950s, and the recognition that it is virtually the universal genetic material, made it imperative for man to apply this knowledge towards unexpected ends.

Extensive use of biological evidence is being made in criminal court proceedings world-over. DNA evidence has assumed great significance in recent years as an important tool for law enforcement agencies. Technological advances have made it more reliable, efficient and acceptable. DNA evidence can help to bring home the guilt, acquit the innocent, or exonerate those wrongly

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[8] Modi's, ***Medical Jurisprudence and Toxicology***, 22nd Edn., Lexis Nexis Butterworths, p. 196 quoted in Jyotirmoy Adhikary, ***DNA Technology in Administration of Justice***, Lexis Nexis Butterworths, New Delhi, 2007, p.13

[9] 'Genome' means genetic material of an organism (gene chromosome)

[10] Dabashish Moitra and Rakesh Kaushal, ***Medical Jurisprudence and Toxicology and Special Chapter on DNA***, 3rd Edn., Delight Law Publishers, Jodhpur, 2007, p.280

[11] It is the self-replicating material present in nearly all living organisms, especially as a constituent of chromosomes, which is the carrier of genetic information of the different social conditions that prevail, and the different historical background and cultural traditions.

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convicted. Forensic DNA Technology has revolutionised the modes of investigation of violent crimes as a result of its awesome ability to convict a perpetrator or exonerate a convicted offender. In sexual assault and homicidal cases, the DNA evidence has become a powerful crime fighting tool. The DNA evidence in the form of saliva, blood, skin tissue, hair and semen is often recovered from crime-scenes and is a crucial tool for investigation of violent crimes. Testing methods currently used for analysing the DNA evidence are considered to be very reliable. Polymerase Chain Reaction (PCR) is the most common form of DNA analysis, because of its capability to amplify very small quantities of DNA. DNA testing can lead to three types of results, namely, inclusion, i.e. when the DNA profile of a known individual (a victim or suspect) matches the DNA profile from the crime-scene evidence; exclusion i.e. when the DNA profile from an individual (a victim or suspect) does not match the DNA profile from the crime-scene evidence; and inconclusive where the DNA testing did not produce information that would allow an individual to be either included or exonerated as the source of the biological evidence. The real investigative power of DNA technology is realised in the context of the cases where a suspect has not yet beenidentified.

Importance of DNA Profiling

The correct identification of criminals and other individuals has always been one of the most important problems in criminal and civil investigations. The best and certain method so far, had been the identification through fingerprints. A similar potent mode has come up for the identification of individuals from all body materials containing cells. This mode excels the other method of identification in certain respects:[12]

a. It permits the identification of the individual not only from the comparison of his own body materials containing body cells inter se, but the identification of his body materials containing cells of his blood relations: parents, sons, daughters, brothers, sisters and like.

b. The identification is possible from a variety of clues, which are available in different types of crimes: blood, semen, hair roots, body tissues, bone marrow etc. They can be linked to the source from where they emanated.

[12] B.R. Sharma, ***Forensic Science in Criminal Investigation and Trials***, 4th Edn., Universal Law Publishing Co. Pvt. Ltd., Delhi, 2003, p.1117-1118

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c. The clues can be identified inter se. Thus, a semen stain can be identified positively from a blood sample, a skin piece, a hair or even a bone marrow taken from the culprit.

d. The quantities of the DNA required for analysis are extremely small, in micrograms. In recent times the requirements have become even less due to amplification of material clues through cell regeneration technology- Polymerase Chain Reaction (PCR).

e. In all countries, thousands of dead bodies most of which are killed, remain unidentified. DNA is helping to reduce the number of such unidentified bodies.

The law of the country is bound to change due to the revolutionary scientific changes. The modern invention of science and technology shall have serious impact on the law and the administration of justice in any country. The new waves of information technology have entered in different legislations in India. The introduction of Information Technology Act, 2000, also influences the Indian Evidence Act, 1872, the Indian Penal Code, 1860. These acts have also been amended. The advent of DNA technology has serious appliances and impact on the administration of justice.[13] DNA Technology has made a drastic improvement in the methodology of proving different types of disputes of civil and criminal cases.

The true character of the legislation has to be ascertained when a provision of law is impugned on the ground that it is ultra vires, the powers of the legislature which enacted it or that it is violative of the rights guaranteed by the Constitution, having regards to the nature of enactment as a whole to its objects.[14]

The fact that the DNA evidence has been accepted universally proves that this evidence is very much authentic, reliable and accurate than other evidences. It is a powerful tool to detect facts and truth in civil and criminal cases.[15] The DNA evidence is more persuasive to the court than any other evidences, e.g., eye-witness, oral evidence, circumstantial evidence etc. Because it is a biological fact which cannot be tampered like other evidences. It always tells a truth. Today the DNA evidence

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[13] Swati, Parikh and M.D. Mishra, ***The Principles of Medical Jurisprudence and Forensic Science, DNA Test and Toxicology***, 3rd Edn., CTJ Publications, Pune, 2007, p.8

[14] *State* v. *Sheshappa Dudhappa Tambade*, AIR 1964 Bom 253

[15] Yashpal Singh and Mohd. Hasan Zaidi, ***DNA Tests in Criminal Investigation, Trial and Paternity Disputes***, Alia Law Agency, Allahabad, 2006, p.36

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has conclusively taken a special birth and acceptance in Indian Legal System as courts in India are passing orders for DNA tests in complex cases.

DNA finger-printing has found widespread acceptance as a system of identification because of certain special features and advantages it has over other older methods of identification such as Bertillonage, Finger-printing, and blood and serum analysis. Compared to Bertillonage[16], it has far more scientific basis and methodological reliability.[17]

Indian courts have more or less accepted the evidence of DNA experts. Unlike the area of paternity disputes where there seems to be some degree of controversy, in the field of criminal law, courts have readily accepted DNA evidence in India.

One instance of the application of DNA profiling/finger-printing evidence being used to convict the accused persons can be seen in the case of Chandradevi v. State of Tamil Nadu[18]. This sensational case involved the rape and murder of several teenage girls in the Ashram of a god-man Premananda alias Ravi, by the god-man and his accomplices.

In this lengthy judgment, the Madras High Court considered 4 important questions:-

1. Whether the DNA evidence is generally accepted by the scientific community?
2. Whether the testing procedure used on this case is generally accepted as reliable, if performed properly?
3. Whether the tests were performed properly in this case?
4. Whether the conclusion reached in this case is acceptable?

In answering the first question the Court relied on the extent to which Courts in the United States had relied on evidence of DNA analysis. The 2nd, 3rd and 4th questions were all answered in

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[16] Wilson, Wall, Genetics and DNA Technology: Legal Aspects (London: Cavendish Publishing, 2002) at 2. An early system of identification devised by Alphonse Bertillon based on measurements made of various parts of the body and notes taken of scars, body marks and personality characteristics, which unlike DNA analysis was neither precise nor accurate, referred in 2003 Cri LJ, Journal Section at 280 quoted in Alex Samuel and Swati Parikh, ***DNA Tests in Criminal Investigation and Paternity Disputes***, Dwivedi and Co., Allahabad, 2009, p.127

[17] See Article by Arjun 2003 Cri LJ, Journal Section at page 280 quoted in Alex Samuel and Swati Parikh, ***DNA Tests in Criminal Investigation and Paternity Disputes***, Dwivedi and Co., Allahabad, 2009, p.127

[18] (2007) 1 MLJ 1425 (Mad)

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affirmative and the accused persons were convicted on various counts on the basis of the evidence of experts on DNA finger-printing/profiling and other evidence.

Expert Evidence

The diktat of common law is that on an issue requiring special knowledge and competence, evidence is admissible from those who have acquired by study or practice, the necessary expertise on that issue because the court on its own would be unable to form proper opinions.[19] Expert evidence must be relevant to some issue which arises in a trial and the issue which will usually make DNA profiling relevant is the issue of identity.[20] Section 9[21] of the Indian Evidence Act, 1872 declares relevant any fact which goes towards establishing identification of a person. Section 45[22] of the Indian Evidence Act incorporates the necessity of expert opinion. The function of an expert is to provide necessary scientific criteria for testing the accuracy of his conclusions in order to enable Judges and Juries to form their independent judgment by the application of these criteria to the facts proved in evidence. The scientific opinion, if intelligible, convincing and tested becomes an important factor for consideration along with the other evidence of the case.[23]

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[19] Alex Samuel and Swati Parikh, ***DNA Tests in Criminal Investigation and Paternity Disputes***, Dwivedi and Co., Allahabad, 2009, p.23

[20] John Philips, A view form the Bench, http://www.atc.gov.au/publications/proceedings/02/phillips.pdf (27 June,2004)
, referred in 2006 Cri LJ Journal Section at p.50

[21] **Section 9- Facts necessary to explain or introduce relevant facts**
Facts necessary to explain or introduce a fact in issue or relevant fact, or which support or rebut an inference suggested by a fact in issue or relevant fact, or which establish the identity of any thing or person whose identity is relevant, or fix the time or place at which any fact in issue or relevant fact happened, or which show the relation of parties by whom any such fact was transacted, are relevant in so far as they are necessary for that purpose.

[22] **Section 45- Opinions of experts**
When the Court has to form an opinion upon a point of foreign law, or of science, or art, or as to identity of hand writing or finger-impressions, the opinions upon that point of persons specially skilled in such foreign law, science or art, or in questions as to identity of handwriting or finger impressions, are relevant facts. Such person called experts.

[23] John Woodroffe and Syed Amir Ali, Law of Evidence Vol.2 (Gopi Nath edn, 16th edn., Allahabad: The Law

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Book Company (P) Ltd., 1996 Edn. At 1396, referred in 2006 Cri LJ Journal Section at p.50

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DNA Evidence in India

State v. Santosh Kumar[24] , a case which brought the DNA controversy to the fore was the case of rape and murder of Priyadarshini Mattoo.[25] At trial,[26] the prosecution case relied on the DNA test of the vaginal swab, which was positive whereas the defence challenged the validity of the test stating that it was not conducted according to prescribed rules. The defence alleged that because crime scene, etc. was not suggestive of sexual intercourse, the presence of semen was not possible and had to have been planted.

In the course of the case, the Judge proposed the following principles for the State:

1. Obtaining known/unknown biological samples in accordance with the law;
2. Maintaining the chain of custody of the samples.[27]
3. Monitoring laboratory procedure, protocol and quality control and;
4. Provision of a fair hearing to the accused by providing him with all the evidence.

While laying emphasis on the growing importance of DNA test , the Hon'ble Court held that "the importance and utility of DNA test is now too well known in criminal as well as civil matters. This test is conducted during investigation of criminal cases mainly in rape and murder like the present one." The High Court referred to the observation of Supreme Court in the case of Smt Kanti Devi v.

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[24] 133 (2006) DLT 393

[25] In January 1996, Priyadarshini Mattoo, 23, was allegedly raped and strangulated in her house in New Delhi. A fellow student, Santosh Kumar Singh, incidentally the son of a senior IPS officer was the main accused and was ultimately acquitted, referred in 2006 Cri LJ Journal Section at p.54

[26] CBI v. Santosh Singh FIR No.50/96, Court of the Additional Sessions Judge, New Delhi, referred in 2006 Cri LJ Journal Section at p.50

[27] The chain of custody refers to the security and reliability of the police and forensic labs which handle DNA evidence. The chain of custody consists of different links, each of which represent an individual who has handled the evidence. It is essential to show that there was n o break in the chain of custody in order to have DNA results admissible as evidence. If accountability is not demonstrated for each link, the chain of custody stands broken and the DNA evidence is rendered inadmissible, referred in 2006 Cri LJ Journal Section at p.55

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Poshi Ram[28] and in Kamalanantha and Ors. v. State of Tamil Nadu[29], that the result of DNA was genuine and scientifically accurate.

Thus Hon'ble High Court held that from an overall analysis of the circumstances it was proved beyond any doubt by unimpeachable evidence and circumstances from a chain so complete which lead the Court to the only conclusion that it is the respondent Santosh Kumar who had committed rape upon the deceased and then murdered her. Thus the Court reached the conclusion that the respondent Santosh Kumar Singh committed the offence punishable under Sections 302 and 376 IPC.

Need for Amendments in the Existing Statutes

In the light of the Constitutional provisions, which require developing scientific temper and rising higher levels of endeavour and achievement, India needs amendments in substantive as well as procedural laws along with the enactment of individual legislation on DNA. The need is felt as

many a times the courts have expressed their inability in giving any order for DNA examination or even the blood test.[30] This is so because as according to the law in India one cannot be forced to give his blood sample and number of times objections have been raised to such an order, in many cases as it has been contended that such an order would violate the rights of an individual enshrined under article 21 or 20(3) of the Indian Constitution. Though such objections have been well answered and have been rightly rejected by the Hon'ble Supreme Court in various cases still there is a need for the enactment of legislation as regards DNA to keep abreast of all new technological advancements for scientists and lawyers alike.

It is quite apparent that the present system has identifiable flaws. Law has to grow in order to satisfy the needs of the fast changing society and keep abreast with the scientific developments taking place in the country. Law must walk with the evolutions which science has made and thus take

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28 AIR 2001 SC 2226

29 2005 (5) SCC 194

30 J.R. Gaur and V. Bhalla, Forensic Anthropology in Crime Investigation and the Administration of Justice, ShivShakti Books, New Delhi, 2008, p.217

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away evidence from the jugglery and trivial objections of lawyers. In India, other than the amendments in the existing statues[31], an exclusive law or Act should be legislated by our Parliament, so that this technique could be effectively used as valuable evidence in the administration of Criminal and Civil Justice. As new situations arise the law has to be evolved in order to meet the challenge of such new situations. Law cannot afford to remain static.

Appropriate Legislative changes are required to be made providing for cases in which the DNA samples can be taken from suspects and convicts of specified offences and from volunteers. The law should make necessary provisions for collection and analysis of the DNA material, storage of DNA samples and results of DNA analysis, and to enable matching of DNA profiles for criminal investigations. Provisions for establishing DNA databank and database system are also required to be made. Training of personnel in different fields relating to investigation, trial and maintenance of database would be necessary for a successful use of DNA evidence in the investigation of serious crimes. Irrespective of the fact that DNA evidence is readily read in the courtrooms but it is no far from criticism which are revolving round the authenticity of collection of these DNA samples, storage of the samples and issues of right to privacy .

Existing controversies around DNA profiling

The DNA test is hit by the right to privacy issues as it is considered that it may flout the privacy of an individual by making his personal information available in public domain and would tend to degrade the dignity of the individual. In the case of *Selvi v. State of Karnataka*[32], the court ruled out that it is mandatory to take consent before conducting forensic techniques like narco analysis. It is important for the court to maintain a proper balance between the dignity of the individual and doing justice.DNA tests should not be ordered by the court in every matter. The court should be vigilant while handling such evidence because it may directly affect the privacy of the individual. Thus it has been proposed to come with new and improved law on DNA profiling while keeping in mind all the necessary safeguards and restrictions. This led to consideration of making a firmer law in this direction which started a long ago. In the year 1985, first time the DNA evidence accepted by the Indian courts. But, it was not till January 2019 that a bill on the issue of DNA was first time

[31] For example in The Code of Criminal Procedure, 1973, Indian Evidence Act, 1872.

[32] (2010)7 SCC 263

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introduced in parliament. The idea to draft a DNA bill regulating the use of DNA samples for crime related reasons was advanced by the Department of Biotechnology in 2003[33]. The department of biotechnology established a DNA profiling advisory committee to make recommendations for the drafting of the profiling bill 2006 and from 2003 to 2007, after four years of effort which eventually became the Human DNA Profiling Bill, 2007. In the year 2007, the draft Human DNA profiling bill was made public. But, it was never introduced in the Parliament and in January 2013, the government through the Department of Biotechnology created an expert committee to deliberate on concerns raised about the bill and to examine the 2012 draft by finalising the text.

Later, in 2016 the bill was listed for introduction, consideration and passing. And in 2018 the Law Commission of India Report in its 271st Report prepared the draft bill , named the DNA based technology bill 2017, which was presented in Parliament in 2019 and thus the current bill is DNA Technology (Use and Application) Bill,2019[34].

Salient Features of Bill of 2019

This Bill, commonly known as DNA profiling bill, was introduced in the Lok Sabha by Mr. Harsh Vardhan, on July 8, 2019, to emphasise on the regulated and more effective use of DNA Technology to establish the identification of persons and to create a national database for doing the same. A regulatory framework for the usage of DNA information is sought to be established by this bill as it provides for establishing authorities both at the Centre as well as state-level for keeping the DNA information and also what type of DNA will be required to be kept. A regulatory board is sought to be established to give requisite authorisation to the laboratories that would be allowed to collect DNA information all across the country. A Nationwide data bank of DNA will be established which will maintain the indices of crime scene index, suspects or offenders, missing or unknown persons. Though the bill mandates seeking of written consent from the individual whose DNA sample is to be collected but this consent is not required for the offences which are punishable for more than seven years or in the case of DNA profiling for civil matters. There is a provision in the section for removal of DNA profile from the stored data through a written request for a person who is neither an offender nor a suspect but whose DNA profile is entered in the "Missing person" index or

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33 Lok Sabh a Passes DNA Technology Bill-All you need to know, The Wire, available at: https://thewire.in/the- sciences/lok-sabha-passes-dna-technology-bill-all-you-need-to-know , visited on 31st March,2021.

34 *Ibid*.

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"Crime scene" index of the data bank. This evidence of DNA profiling can be used only for the identification of that person who is related to the matter in any of the ways provided by the bill which are as follows: a) Offences under the IPC which is useful for investigating offences, b)Offences which are in special laws such as immoral trafficking, domestic violence, civil right violation, motor vehicle Act, etc. and c) paternity disputes in civil matters for fixing the identity of the parents of the child.

Advantages of the bill

Having seen the salient features of the bill it becomes a pertinent part of the writing to evaluate the pros and cons of the same to bring a better and complete law in the public domain. Thus the appreciation is bagged by the bill on the ground that there will be no threat to individual's privacy ad the data banks cannot release any such information in the absence of any formal requisition.

This information is not readily available and can be accessed only after a long drawn process. The samples and the patterns can be used only for the specified purposes which have to be necessarily in the nation's interest , for the forensic interest and in the interest of the police for smooth conduct of investigation. To avoid any misuse or manhandling with DNA profile of a person, the same shall be
kept in the custody and safety of a body which is controlled by the government.

Disadvantages of the bill

Though on one hand we can see few advantages of the bill but the list of criticism faced by the bill is vast and wide. Congress leader Shashi Tharoor alleged that the bill would institutionalise a "surveillance state" and suggested that a data protection law should be put in place first. "You cannot put the cart before the horse," he said[35]. The emphasis is placed on the tabling of data protection laws and then to think of rolling out DNA bill.
The bill also seems to be in complete disregard and ignorance of right of privacy which has been recognised as a fundamental right in *K. S. Puttaswamy and Ors. vs Union of India and Ors case*[36] as it is in conflict with the privacy of the individuals, because all the details of the one's body and his DNA profile will be with the State. The DNA profiles can reveal extremely sensitive

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35 Amid Opposition Criticism, Government Tables DNA Technology Bill in Lok Sabha in *The Wire* ,https://thewire.in/ government/dna-technology-regulation-bill-lok-sabha, 8th July,2019, visited on 31st March, 2021

36 AIR 2017 SC 4161

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information of an individual such as pedigree, skin colour, behaviour, illness, health status and susceptibility to diseases. Such intrusive information can be misused to specifically target individuals and their families with their own genetic data. This is particularly worrying as it could even be used to incorrectly link a particular caste/community to criminal activities[37].Though the bill mandates on taking of written consent of the person whose sample is to be collected but this consent can be easily undone by the order of the Magistrate for which no clear grounds and reasons are mentioned in the bill making it a fatal law. The bill is also unclear on privacy issues that whether the DNA profile for civil matters should also be stored in the DNA data banks.

Conclusion

No doubt the bill is faced with lot of criticism and presence of loopholes but if remedied, this piece of legislation will help in strengthening and speeding up many unfinished tasks and dispensation of justice can be ensured.The DNA technology (use and application) regulation bill, 2019 can prove to be such a legislation in the Indian legal system which can gear up administration of justice as its has been observed in so many heinous offences such as rape and murder, that DNA profiling can facilitate to arrive at a conclusive and concrete evidence in the absence of any other evidence available. There are so many countries in the world which are using the DNA technology for tracking criminal offence. This law can become very useful in identifying missing children, in identifying unidentified deceased, including disaster victims and apprehend repeat offenders for heinous crimes such as rape and murder. It appears that delivery of justice through DNA bill seems to be a distant dream, unless and until it is strengthened on the lines of safeguarding the rights of the citizens [38].

37 Sobhana K. Nair,' *DNA Bill can be misused for caste-based profiling, says panel draft report*' available at https:// www.thehindu.com/news/national/dna-bill-can-be-misused-for-caste-based-profiling-says-panel-draft-report/ article32429334.ece visited on 31st March, 2021.

38DNA Technology Regulation Bill: Will the Standing Committee's concerns about privacy, capacity be addressed by Parliament?, Firstpost, available at https://www.firstpost.com/india/dna-technology-regulation-bill-forensics-will- committee-concerns-privacy-capacity-addressed-by-parliament-9423781.html , visited on 31st March,2021

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