

Technological Development in Criminal Investigations and Law

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ABSTRACT:

In the 21st century, development in the scientific arena has been manifold. As jurist Roscoe Pound once propounded that law must evolve with the changes of the society. With the introduction of technology in the society it has led to more complex crimes being committed which are more difficult to trace, so in today's scenario it is of paramount importance that law must cope with the technological advancements. It is a well acknowledged fact that India has one of the lowest police to population ratios in the world. In addition to this, the poor conviction rates of serious crimes which solicit for more corroborative evidences, better coordination among the law enforcement agencies and preserving the sanctity of evidences, so lack of manpower coupled with adoption of obsolete techniques during investigation puts the entire criminal investigation process in a serious jeopardy. Therefore, the need of the hour is for a holistic integration of forensic and technological inputs in the course of an investigation of a criminal offence. In furtherance to this, the concept of DNA finger printing or profiling has gained unprecedented significance. With the lower house of the parliament passing the DNA Technology (Use and Application) Regulation Bill, which provides for regulated use of DNA for establishing the identity of persons in criminal investigations and specified civil matters it is equally important to put emphasis on various statutory and constitutional safeguards which are being guaranteed to an accused of an offence, irrespective of the nature of his act. Critics of this concept have always flagged the privacy aspect of the accused. Moreover, ways need to find out how to converge two seemingly divergent concepts i.e. protecting the privacy of a potential Criminal and at the same time ensuring a fair and effective investigation on the part of the victim.

Keywords- DNA finger profiling, Privacy, criminal investigation

I. INTRODUCTION

Crimes in a society are attributed as a wrong against the entire society rather against the victim only. Given the widespread ramifications of a criminal offence coupled with the intention of inflicting deterrence in the mind of prospective criminals, it is highly essential to have a robust criminal justice system in which speedy and concrete investigation is a *sine qua non*. Apart from being a quick and thorough investigation, it must also ensure various statutory and constitutional safeguards guaranteed to the accused. Moreover, right to privacy has been recognised as a Fundamental right¹, which makes it mandatory to respect the privacy of accused both in letter and spirit.

It is a matter of great shame that India has one of the lowest police to population ratios in the world². Also, a

¹Justice K. S. Puttaswamy (Retd.) and Anr. vs Union Of India And Ors WRIT PETITION (CIVIL) NO 494 OF 2012.

² The Hans India, *India has lowest police population ratios in the world*, The Hans India, 29 July 2016 8:49 PM, <https://www.thehansindia.com/posts/index/National/2016-07-29/India-has-lowest-police-population-ratios-in-the-world/245425>.

major chunk of police force gets embroiled in the maintenance of law and order mechanism. For that, we have to increase the use of technology to replace the gap between demand and supply of manpower.

In this context, the concept of **DNA profiling** has gained a much-needed impetus. With the lower house of the parliament passing *The DNA Technology (Use and Application) Regulation Bill, 2018*³. The bill will allow the government to establish a National DNA Data Bank and a DNA Profiling Board, and use the data for various specified forensic purposes.

II. BACKGROUND AND JOURNEY OF THE BILL

The idea of a DNA profiling for a smoother criminal justice system is not new in India. Earlier, DNA analysis was mostly done in solving paternity disputes. In 1984, DNA in criminal investigation was first used in UK. In India, *Kunhiraman v. Manoj*⁴, was the first case relating to the admission of DNA Technology. It has gained recognition by virtue various apex court judgement given the reliability of it.

The initiative to draft a Bill regulating the use of DNA samples for crime-related reasons began in 2003, when the Department of Biotechnology (hereinafter referred as DBT) established a committee known as the DNA Profiling Advisory Committee to make recommendations for the drafting of the DNA profiling Bill 2006, which eventually became the Human DNA Profiling Bill 2007. The bill was heavily criticised by civil societies, NGOs, for not addressing much important privacy concerns. In 2013, DBT formulated an expert committee to deliberate on concerns raised about the bill and also to finalise the text. In 2015, Union Government planned to table the bill in the parliament in monsoon session but didn't do so due to widespread criticism over privacy and data security safeguards.

The use and Regulation of DNA based technology in civil and criminal proceedings Identification of Missing persons and Human remains Bill, 2016 listed for introduction, consideration and passing. It provided for setting up of a statutory DNA profiling board to spell out procedures and standards to establish DNA labs. Besides, it also provided for creation of DNA data banks at national and regional levels. These banks would be responsible for maintaining indices like crime scene index, suspects index, offenders index, missing persons index and unknown deceased persons index. However, activists and experts raised question over the 2016 version of the bill as well. They raised doubts on the how the bill planned to safeguard the privacy of those whose DNA profiles will be stored in data banks against contamination and theft of it. Moreover, the terms of the usage and availability of the profile among law enforcement agencies, scientists and foreign agencies remained debatable.

Law commission of India in its 271st report prepared the draft bill namely, "The DNA Based Technology (Use

³ The DNA Technology (Use and Application) Regulation Bill, 2018, 142 of 2018.

⁴ II (1991) DMC 499.

and Regulation) Bill, 2017". The commission examined various judicial pronouncements and constitutional provisions and observed that DNA profiling bill was indeed used for disaster victim identification, Investigation of serious crimes, identification of missing persons and also for medical research purposes. However, it also flagged that privacy concerns and the ethics involved in this scientific collection of data were very high. The commission said "the procedure for DNA profiling if given statutory recognition should be done legitimately as per constitutional provisions."

The current bill passed in the Lok Sabha is a mirror image of the draft bill prepared by the Law commission. The bill contains a number of improvements from previous versions such as:

- a) Inclusion of provisions such as consent;
- b) Defined the instances for deletion of profiles;
- c) Limitation on purpose of use of data in DNA data banks;
- d) Defined instances for destruction of biological samples;
- e) and the ability for an individual to request a retest of bodily substances if they believe contamination has occurred.

III. WHAT IS DNA PROFILING AND WHY IT IS IMPORTANT FOR INDIA?

DNA stands for deoxyribonucleic acid, the strands of identity that living beings receive from their ancestors. Outside of identical twins, no two people have the same DNA pattern. DNA fingerprinting also has certain distinctive features⁵. DNA is found in all body cells. Therefore, all biological materials containing body cell-like blood, semen, saliva, urine, vaginal fluids, flesh, skin, hairs, and nail scrapings, bone, bone marrow⁶ are source materials for the DNA profiling. Identification of individuals, associated with the crime has always been an important feature in criminal investigation. In many cases, criminals have been able to duck liability due to uncertainty of identity of the offender or of the victim in certain cases. The traditional methods of identification such as eye witnesses, confessions of the culprit, circumstantial evidences have failed to produce desired results which can be attributed to low conviction rates⁷. In light of this, DNA profiling has gained significance importance worldwide. The DNA is now being used extensively in criminal investigation mainly to identify the culprit, the victim, to establish their presence at the crime scene or to interlink them with their relatives⁸.

⁵ Law Commission of India, *Human DNA Profiling – A draft Bill for the Use and Regulation of DNA-Based Technology*, Report No. 271, 26(July 2017).

⁶ B R SHARMA, *SCIENTIFIC CRIMINAL INVESTIGATION* 154 (2nd ed., 2017).

⁷ Divya Shukla, *An analytical study of decreasing rate of conviction in India*, vol 4 IJL 91, (2018).

⁸ B R SHARMA, *SCIENTIFIC CRIMINAL INVESTIGATION* 138 (2nd ed., 2017).

Why for India?

The National Crime Records Bureau (NCRB) Report of 2016⁹ has revealed a staggering rise of crimes against the human body, i.e. murder, rape, human trafficking and grievous hurt. Officials have confirmed that a very small proportion of these crimes are currently being subject to DNA technology, and hope that an increased reliance on the same would result in successful convictions.

The Lokniti Foundation, an NGO in 2017 pleaded that a DNA database could be instrumental in the identification of unidentified dead bodies before their ultimate disposal. The Foundation demanded information on the progress of the Bill, to which the Centre intimated the bench headed by Justice Dipak Misra, that the legislation process had begun. The primary concern of the petitioner was that the “influx of migrants across the country has increased the crime rate” and a corresponding upheaval of corpses, which have not been traced back to their families¹⁰.

As per a report¹¹, 175 children go missing every day in India and the impact is very evident. Similarly, the number of unidentified dead bodies in India is pretty staggering¹². The primary reason for non-identification is due to mutilation. Consequently, no FIR is registered and ultimately justice delivery mechanism gets paralysed.

Moreover, DNA profiling has been used in many high profile cases like:

➤ **Chattisinghpora massacre**

In this case Indian army was alleged of killing 36 innocent civilians in J&K region in the year 2000. According to Indian government they belonged to militant group, Lashkar-e-Taiba. The then Chief Minister Farooq Abdullah ordered the DNA testing and profiling of the bodies from the Chatti singh pora killings, which upon testing conclusively proved that the victims were innocent local civilians, and not foreign militants as the Indian government had been claiming.

➤ **Rajiv Gandhi Assassination**

Rajiv Gandhi, who was a former Prime Minister of India, was killed by a suicide bomber. Most material evidences were destroyed in the massive explosion. Moreover, dead bodies of the victim as well as of the assassin were dismembered beyond recognition. DNA tests helped in matching dismembered parts of the

⁹ Ministry of Home Affairs, National Crime Records Bureau, 2016.

¹⁰ Katyayani Sinha, *Why the DNA bill 2018- a tangled mess of unresolved concerns- is privacy and security nightmare*, August 16, 2018, available at <https://theleaflet.in/why-the-dna-bill-2018-a-tangled-mess-of-unresolved-concerns-is-a-privacy-and-security-nightmare/>.

¹¹ Bala Chauhan, *India's children: 174 go missing every day, half untraced*, Deccan Chronicle, May25, 2018.

<https://www.deccanchronicle.com/nation/current-affairs/250518/indias-children-174-go-missing-every-day-half-untraced.html>.

¹² National Security Strategy, *Unidentified Dead Bodies and Missing Persons*, Bureau of Police Research and Development, <http://www.bprd.nic.in/WriteReadData/CMS/Unidentified%20Dead%20Bodies%20&%20Missing%20Persons.pdf>.

bodies of the victim and assassin. In this case DNA evidence was used as one of the circumstantial evidences to link the criminal with a crime as well as to identify the victim and accused.

IV. VARIOUS JUDICIAL PRONOUNCEMENTS HIGHLIGHTING THE NEED FOR DNA PROFILING

SC in *Rajendra Pralhadrao Wasnik v State of Maharashtra*¹³ held that

“There can be no doubt that there have been remarkable technological advancements in forensic science and in scientific investigations. These must be made fully use of and the somewhat archaic methods of investigations must be given up”.

In the case of *State of Gujrat v Kishanbhai*,¹⁴ the court lamented the failure of the investigating agency to take advantage of scientific investigations and held “There has now been a great advancement in scientific investigation on the instant aspect of the matter. The investigating agency ought to have sought DNA profiling of the blood samples, which would have given a clear picture whether or not the blood of the victim [deleted] was, in fact on the clothes of the respondent/accused Kishanbhai.”

In the recent case of *Mukeshand Anr. v. State (NCT of Delhi)*,¹⁵ the court acknowledged the reliability of DNA and held, “In our country also like several other developed and developing countries, DNA evidence is being increasingly relied upon by courts”.

In the very same judgement, Bhanumathi J in a separate opinion elaborated on the reliability of DNA. As per her ladyship, “DNA profiling is an extremely accurate way to compare a suspect’s DNA with crime scene specimens, victim’s DNA on the blood-stained clothes of the accused or other articles recovered, DNA testing can make a virtually positive identification when the two samples match.”

In this regard, it is important to recall the landmark judgement delivered in *Selvi v State of Karnataka*¹⁶ wherein the apex court held the methods of Narco analysis, BERP, Polygraph test as intrusive of personal liberty and violation of right against self-incrimination but also observed that “The matching of DNA samples is emerging as a vital tool for linking suspects to specific criminal acts.” So, in a way, at one hand the court was apprehensive about the three mentioned techniques but at the same time it was not so sure about DNA profiling.

¹³(2018) SCC OnLine SC 2799.

¹⁴ (2014) 5 SCC 108.

¹⁵ (2017) 6 SCC 1.

¹⁶ (2010) 7 SCC 263.

V. CRITICAL ANALYSIS OF THE DNA TECHNOLOGY (USE AND APPLICATION) REGULATION BILL, 2018

The bill can be broadly divided into four parts.

- The first part spells out the “Reasons for collection of DNA data.” It is capsulated in the form of Schedule which mentions circumstances in which it is to be used.
- The second part envisages safeguarding the data collected. It ensures the privacy of the person remain intact.
- The thirds part deals with the “Regulatory Mechanism.”
- The fourth part embodies the penal provisions in case the sensitive information is misused by the authorities.

DNA Regulatory Board

The bill allows for a creation of 13 members body as Regulatory Board, with the Secretary to the Government of India in the Department of Biotechnology, who shall be the Chairperson, ex officio and other eminent persons from various spheres like DGPs, NHRC among others.

The power of this board is also advisory in nature. It is argued by critics that the advisory board has been bestowed with unfettered powers. But we have to keep in mind that till the time power is regulated by an act of parliament and the rules are framed which are strictly implemented and the protection provided by the act itself, than if somebody is misusing that then sufficient safeguards are enshrined in the act itself.

The DNA samples collected shall be stored at national and state level. The persons who can have excess over the data shall be determined by Regulatory board. The ambit of the collection mechanism is determined by the Schedule in the bill.

Another important dimension, an analogy is being drawn with the data collected through Aadhar. It is important to take note that when data was collected under Aadhar, at that point of time there was no law to govern it. Aadhar act came much later and the protection have been built in that. But under this bill, provisions for protection of data is already there and in case somebody is misusing then sufficient punishment is prescribed in the form of imprisonment for 3 years and a fine up to Rs. 1 lac.

Privacy concerns

Earlier the underlying reason for divergence in consensus was due to the vulnerability of the person whose DNA shall be collected. For instance, maintenance of a DNA database of all citizens, some of whom may be

innocent, to track crime, without legal sanction, would be a disproportionate law enforcement measure.¹⁷ A combined reading of chapter VI and chapter VIII of the bill, titled as “Protection of Information” and “Offences and Penalties” puts an overriding duty on the information holders to safeguard the sensitive data or else have to face penal consequences.

Moreover, When DNA samples are stored, it contains minute information related to genetics but the profile that shall be generated will only contain limited information and that information shall be used for specific purpose.

The striking part of this entire mechanism is that the consent of a person is respected though not absolutely. Unlike in the case of UK, where consent is not given any sort of primacy. But under the proposed bill, when the offence is punishable less than 7 years then the authorities need to take consent of person, whereas if the offence dealt is punishable with more than 7 years then it can be taken automatically. Also, as far as privacy in today’s world is concerned, then it has a different connotation altogether. As far as use of DNA profiling is concerned, then the legislation is very clear where it can be used. So, the implementation of the law will be more important than the legislation.

The committee formulated under the bill shall remain alive and will advise the central government and state governments in case a new scientific development which affects privacy of citizens come into bearing after the passage of the bill. The legislation is designed in a flexible manner in which changes in technology shall be incorporated.

Self-Incrimination Aspect

Article 20(3) of the constitution guarantees the right against self-incrimination. Section 161(2) of code of criminal procedure embodies the required statutory provision in this regard. But the apex court has time and again reiterated that self-incrimination is a right, but not absolute. In one of the cases dealing with the issue of “fingerprint” as violative of right against self-incrimination, it held “Thus, the giving of finger impressions or of specimen writing or of signatures by an accused person, though it may amount to furnishing evidence in the larger sense, is not included within the expression 'to be a witness.'”¹⁸ The SC in *Bhabani Prasad Jena v. Convenor Secretary, Orissa State Commission for women*;¹⁹ emphasised the significance of DNA testing in the process of administration of justice.

The above judicial pronouncements make a hint that proper balance should be struck between the right against self-incrimination of the accused against the inherent human rights such as right to have a speedy trial.²⁰

¹⁷ Justice B.N. Srikrishna, *A Free and Fair Digital Economy Protecting Privacy, Empowering Indians*, 134 (July 27, 2018).

¹⁸ *State of Bombay v Kathi Kalu Oghad* & ors AIR 1961 SC 1808.

¹⁹ AIR 2010 SC 2851.

²⁰ *Hussainarakhatoon v. Home Secretary State of Bihar* [(1980) (1) sec 98].

Enabling DNA technique for the purpose of identification is a sound way to recognise the actual offender and it saves considerable time of the court. Moreover, it is recognised worldwide that the technique of DNA profiling is more reliable than blood samples as it remains pious for a substantial amount of time.

VI. CONCLUSION

The poor conviction rate for serious offences is becoming a regular phenomenon in our country and proving a serious blot in our criminal justice system²¹. The use of old, if not, obsolete techniques of evidence collection and Identification of persons associated with the crime serves very less in order to thrive for a quick and prudent disposal of pending cases. The emergence of DNA in today's era can be seen in the same parlance with the fingerprinting techniques in the 1900s when it comes to their use in criminal investigations. Most of the countries have enacted appropriate laws within the framework of their respective constitutions and other legal frameworks for the aforesaid purposes²². The Union government by virtue of The DNA Technology (Use and Application) Regulation Bill, 2018²³ has tried to incorporate the idea of a national DNA database which was first mooted in 2003 for effective identification and has tried to embodied the pivotal issues which were raised during the course of its mutation. The bill has been meticulously crafted to make a fine balance among various divergent rights such as right to privacy of accused with right to life of the victim or the missing person, similarly with right to fair trial of the victim with the right against self-incrimination of the accused. Although, the bill's desirability, it is beyond doubt but when it comes to feasibility of such project many questions remain unanswered. The financial memorandum to the bill estimates there will be one-off cost of Rs. 20 crores to set up the database, with annual cost of Rs. 5 crores to maintain it. This is completely unrealistic: for comparison, the U.K. National DNA database cost £3.7 million to run in 2015-16²⁴. Given the financial constraints, it is highly unlikely that we can match up with the standards set up in developed nations. Moreover, it is important to understand that first-hand collection of DNA from the crimes scene shall be done by the local police, at this juncture it is important to relook at the scientific wherewithal our existing police is equipped with.

So to conclude, it is high time for us to cope up with the scientific advancements taking place and accordingly incorporate in investigation process. Certainly, the passing of The DNA Technology (Use and Application) Regulation Bill, 2018 is a step in the right direction but effective implementation at the ground level still remains worrisome. Let's hope that there doesn't remain any gap between "Intent" and "Implementation" of the bill.

²¹ Supra 6.

²² Law commission of India, *Human DNA Profiling – A draft Bill for the Use and Regulation of DNA-Based Technology*, Report no. 271, 26 (July, 2017).

²³ The DNA Technology (Use and Application) Regulation Bill, 2018, 142 of 2018.

²⁴ Hellen Wallace, *Decoding the DNA bill*, The Hindu, (August 09, 2018), <https://www.thehindu.com/opinion/op-ed/decoding-the-dna-bill/article24636395.ece>.