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## Paternity identification and application of DNA profiling: Judicial aspect

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### Abstract

DNA testing is a scientific method that is utilized to aid in the recognition of individuals based on their individual DNA profiles. This process is utilized to determine and confirm the connection between individuals and is commonly referred to as a paternity test. Each person possesses a unique DNA code that distinguishes them from all others on the planet. Offspring inherit their DNA in equal measure from both biological parents. Consequently, it is feasible to establish paternity or identify the biological parents of any individual as long as DNA samples are obtainable from the child and mother, with the exception of cases involving identical twins. Identical twins possess identical DNA and are the only scientifically documented instances where the overarching scientific principle appears to be violated. Since time immemorial, various techniques for identification have been adopted; however, DNA profiling has been proven to be the infallible one. Identification is the key question that needs to be answered in civil and criminal cases. Thus, it can be said that paternity testing is the tool through which the paternity of a person can be identified when such a relationship is in question. Apart from paternity disputes, DNA testing is also helpful in cases of maintenance, rape. Moreover, it is to be considered that such tests should be only for the protection of the rights of a child. Hence, this paper focuses on paternity identification and DNA profiling through a legal lens.

**Keywords:** Paternity identification, DNA profiling, role of judiciary

### Introduction

Paternity identification and the application of DNA profiling have become important tools in the field of law, especially in cases of disputed parentage. In recent years, there has been a significant increase in the use of DNA technology to establish paternity, and its impact on the judicial system cannot be overstated. The use of DNA profiling in paternity cases has revolutionized the way in which paternity is determined. It has provided a scientifically reliable method for establishing biological parentage and has helped to resolve disputes regarding child support, inheritance rights, and custody arrangements. Another important aspect of the application of DNA profiling in paternity cases is the issue of consent. In the case of *Goutam Kundu vs. the State of West Bengal* <sup>[1]</sup>, the Calcutta High Court held that consent is a crucial factor in the admissibility of DNA evidence in paternity cases. The court emphasized that the consent of the parties involved in the testing process is essential to ensure the reliability and validity of the results. This decision highlighted the importance of ethical considerations in the use of DNA testing for paternity identification.

The case of *Shri Rohit Shekhar v N D Tiwari* <sup>[2]</sup> Division Bench of Delhi High Court clearly explains,

“...that when modern tools of adjudication are at hand, must the courts refuse to step out of their dogmas and insist upon the long route to be followed at the cost of misery to the litigants .... The courts are for doing justice, adjudicating rival claims and unearthing the truth and not for following age-old practices and procedures when new, better methods are available <sup>[3]</sup>.”

The progress of science has greatly affected law. The Govt. of India has observed the ongoing progressions in science and past fitting enactments. Judges need to take after those authorizations and apply the same at whatever point the need emerges. In that capacity, officials and Judges can't stay detached from the most recent logical progression. Indeed, even without suitable enactment, the Judges have connected the logical procedure in comprehending debate, given that they didn't explicitly repudiate the current law. The most recent illustration is the utilization of DNA; however, enactment has not been passed in such a manner that, being said, it is utilized as a part of fitting cases.

In India, DNA proof was first introduced in 1991 in the Kerala High Court in a paternity debate <sup>[4]</sup>. The use of DNA profiling has become increasingly common in paternity cases, as it provides accurate and reliable evidence for the determination of biological parentage <sup>[5]</sup>. However, the admissibility and reliability of DNA evidence in Indian courts have been the subject of much debate and scrutiny. This paper will explore the various judicial aspects of paternity identification and the application of DNA profiling, with a specific focus on Indian case laws.

### Value of DNA evidence

The value of DNA evidence under Indian law has become increasingly significant in recent years. DNA evidence has the potential to provide crucial information in criminal investigations and court proceedings, and its use has the potential to impact the justice system in India significantly <sup>[6]</sup>. The value of DNA evidence under Indian law extends beyond criminal proceedings. The use of DNA evidence can also be valuable in civil cases, such as paternity disputes, inheritance claims, and immigration proceedings <sup>[7]</sup>. DNA testing can provide accurate and reliable information in resolving disputes and establishing familial relationships. In the case of *State v Sushil Sharma* <sup>[8]</sup>, Tandoor case (NainaSahni case) DNA profiling from burnt remains found in the victim's tandoor. Similarly, in the *Santosh Kumar Singh v State through CBI* <sup>[9]</sup> (Priyadarshani Mattoo case), DNA evidence was used; in India, numerous high-profile cases of rape and brutal murder have resulted in successful convictions due to DNA evidence.

The DNA evidence in the legal system cannot be overstated. DNA evidence has revolutionized the way in which criminal cases are investigated, prosecuted, and tried. The use of DNA evidence has contributed to the exoneration of wrongfully convicted individuals, the linking of criminals to their crimes, and the establishment of the innocence or guilt of defendants <sup>[10]</sup>. With its unparalleled accuracy and reliability, DNA evidence has become an indispensable tool in the pursuit of justice. In addition to identifying perpetrators, DNA evidence has also played a crucial role in exonerating individuals who have been wrongfully convicted. Numerous individuals who were wrongly imprisoned have been released as a result of DNA testing, highlighting the importance of this technology in ensuring that justice is served. DNA evidence has revealed the fallibility of eyewitness testimony and other forms of evidence, leading to the reevaluation of cases and the correction of miscarriages of justice <sup>[11]</sup>.

In the case of *Kunhiraman v. Manoj* <sup>[12]</sup>, a dispute arose over paternity when a young man, after assurances of marriage, engaged in sexual relations with a young woman who subsequently became pregnant. When the woman sought maintenance after the birth of the child, the man denied his responsibility. However, following a court order for DNA testing, it was determined that he was indeed the father of the child. The court admitted the DNA test results as evidence under Section 45 of the Indian Evidence Act of 1872. Subsequently, the Kerala High Court affirmed the decision of the lower court, establishing that the results of DNA testing alone are sufficient and conclusive evidence in establishing paternity <sup>[13]</sup>.

In the paternity dispute case of *Kantidev vs Poshiram* <sup>[14]</sup>, the court made it clear that although the result of a genuine DNA test is considered scientifically accurate, it does not

supersede the conclusive presumption established by Section 112 of the Act. For instance, if a husband and wife were cohabiting during the time of conception, but a DNA test shows that the child was not by the husband, the legal presumption remains irrefutable. This may pose a challenge for the husband who is then obligated to accept paternity of a child who is not biologically his own. However, even in such circumstances, the law prioritizes the protection of the innocent child from being illegitimate if the mother and her spouse were living together during the time of conception. Therefore, the question of the level of proof required to rebut the presumption of legitimacy must be assessed in accordance with the definition of access or non-access as outlined by the court <sup>[15]</sup>.

One of the key values of DNA evidence is its ability to provide a high degree of certainty in identifying individuals. Unlike other forms of evidence, such as eyewitness testimony or fingerprints, DNA evidence can definitively link a suspect to a crime scene <sup>[16]</sup>. The unique genetic code contained within DNA makes it virtually impossible for two individuals to have the same DNA profile, making it an incredibly reliable method of identification. This level of certainty can be crucial in criminal cases, particularly when the stakes are high, and the consequences of a wrongful conviction are severe. DNA is a potential means in light of the fact that every individual's DNA is not quite the same as others, with the exception of indistinguishable twins.

1. DNA continues as before all through the lifetime of a man.
2. It doesn't change with age.
3. (iii)No issue from which tissue one separates DNA – cerebrum, hair, semen, blood, bone, sputum, pee, skin, kidney or some other tissue, all give a similar DNA fingerprinting design in a person.
4. The creation of a man's DNA does not change from cell to cell, with the exception of egg and sperm cells. These cells have half of the complement of DNA displayed in other body cells.
5. DNA is steadier than some other material on the earth. It can be warmed, bubbled and denatured. Under adept conditions, cushion, temperature, and so on, the strand returns together, shaping a twofold helix.

In the case of *Geeta V. state of Kerala*, <sup>[17]</sup> the court held that the DNA testing report of CDFD, Hyderabad (A.P.), was inadmissible under Sec.293Cr.p.c. <sup>[18]</sup> In the case of *Vishal Motising Vasava V. State of Gujarat*, <sup>[19]</sup> the DNA trial of the spouse was at that point completed, and the wife was uninformed of it, the report of such DNA test was discovered negative. The spouse moved the application for a second DNA trial of the husband at her decision of the Forensic Science Library. In this application, the court said that the session Judge had the optional capacity to permit the second test and request for the same. Practicing such power is lawful. However, the complainant can't demand that such a test be completed at a specific research Centre. The complainant had no such vested right, and the state may complete a DNA test at the closest FSL <sup>[20]</sup>. In the case of *Krishnappa V. Vennkatappa* <sup>[21]</sup>, the Madras High Court provided an interpretation of the phrase "no access", as mentioned in Section 112, regarding the legitimacy of a child. The court clarified that "no access" does not solely imply the absence of effective access or sexual intercourse. Instead, it encompasses the mere possibility of no sexual

intercourse occurring, thereby suggesting that the absence of conclusive evidence of sexual intercourse alone does not automatically disprove the legitimacy of the child.

In the case of Chandan Panalal Jaiswal V. State of Gujarat<sup>[22]</sup> the court considered that DNA examination is a significant distinguishing proof system, and it ought to be utilized painstakingly. In this manner, the case in gathering, guardianship and control by natural example (s) is of extraordinary significance for the legitimacy of this examination<sup>[23]</sup>. In the case of Syed Mohd. Ghouse V. Noorunisa Begum<sup>[24]</sup>, the spouse and the minor girl recorded a request for upkeep against the appealing party. In this case, the marriage was not denied by the candidate, but rather, the paternity was denied. Thus, the candidate declined to keep up with his young girl child. He requested a blood test of a girl child with the goal that it might demonstrate that he was not the father of that child. In the present case, the court held that the court cannot compel the father to submit himself to a DNA test to decide the paternity<sup>[26]</sup>. In another case, Banarsi Das v. Teeku Dutta<sup>[25]</sup>, the court has held that DNA test orders are not allowed as a matter of routine. Andhra Pradesh HC, in the case of Patangi Balaram Venkata Ganesh v State of Andhra Pradesh<sup>[27]</sup>, the court held that a DNA test is admissible.

Despite the growing acceptance of DNA profiling in paternity cases, several challenges persist<sup>[28]</sup>. These include issues related to the accuracy and integrity of DNA testing, privacy concerns, and the need for standardized protocols in sample collection and analysis. The role of the Indian judiciary in paternity identification through DNA profiling is indispensable in ensuring fairness and equity in familial matters. By embracing scientific advancements and adapting legal frameworks to accommodate DNA evidence, courts can effectively adjudicate paternity disputes, uphold the rights of all parties involved, and promote the best interests of the child.

### Right to privacy & DNA profiling

The right to privacy is a fundamental human right that is enshrined in various international and national laws and declarations. It protects individuals from unwarranted intrusion into their personal lives and ensures that they have control over their personal information. DNA profiling, on the other hand, is a powerful tool used in forensic science to identify individuals based on their unique genetic code. However, the use of DNA profiling has raised concerns about the right to privacy, as it involves the collection and analysis of individuals' genetic information. DNA profiling involves the collection of biological samples<sup>[29]</sup>, such as blood or saliva, from individuals and the analysis of their genetic material to create a unique genetic profile<sup>[30]</sup>. This profile can be used to identify individuals and link them to crime scenes or other evidence. While DNA profiling has revolutionized forensic science and has been instrumental in solving crimes and exonerating innocent individuals, it also raises significant privacy concerns<sup>[31]</sup>. The collection and storage of individuals' genetic information raise the potential for misuse, such as genetic discrimination or unauthorized access to sensitive personal information.

The introduction of DNA technology has approached a genuine test of someone's personal information. For example, in the United States, the DNA Identification Act of 1994<sup>[32]</sup> established the National DNA Index System<sup>[33]</sup>, which enables law enforcement agencies to store and

compare DNA profiles collected from crime scenes and individuals convicted of certain offences. The Act also includes provisions to protect the privacy of individuals by restricting the use of DNA samples and profiles for purposes other than law enforcement. This is more important why the court is hesitating in allowing confirmation in the light of DNA technology. The ideal principle against the right to life under Article 21<sup>[34]</sup> and the right against self-incrimination under Article 20(3)<sup>[35]</sup> protects someone from saying something against him when he is accused or is in charge of a crime.

In the case of Thogorani Alias K. Damyanti V. State of Orissa<sup>[36]</sup>, the Orissa High Court emphasized the importance of striking a balance between public interest and the rights afforded to the accused under Articles 20 (3) and 21 of the Constitution. Specifically, when issuing a directive for the collection of blood samples from the accused for DNA testing, the court should consider both the societal interest in determining the truth and justice, as well as the fundamental rights of the accused to a fair trial and protection against self-incrimination<sup>[37]</sup>. In the case of Anil Ananthorav Lokhande v State of Maharashtra<sup>[38]</sup>, the court underscored that the collection of a blood sample from the accused for comparison purposes does not constitute testimonial coercion. Consequently, such action does not violate Article 20 (3) of the Indian Constitution.

The legal framework surrounding DNA profiling in India is governed by the DNA Technology (Use and Application) Regulation Bill, 2019<sup>[39]</sup>. The bill seeks to regulate the use of DNA technology for establishing the identity of certain categories of persons, including offenders, suspects, undertrials, missing persons, and unknown deceased persons. The bill also establishes a DNA Data Bank to store and maintain DNA profiles. However, the bill has been withdrawn by Lok Sabha on July 24, 2023<sup>[40]</sup>.

On several occasions, the Supreme Court held that this right is an absolute right. In Govind Singh v State of Madhya Pradesh<sup>[41]</sup>, the Supreme Court held that fundamental rights are subject to restriction based on public interest. In another case Kharak Singh V. State of Uttar Pradesh<sup>[42]</sup>, the Supreme held that the Right to Privacy is not a guaranteed right under our Constitution. The application of DNA technology has held a genuine test to some lawful and essential rights of an individual. This is more important why the court is hesitating in allowing confirmation in the light of DNA technology. To ensure that the innovation can be utilized more successfully. There is an urgent need for the enactment of legislation that will guide DNA testing in India. The utilization of DNA technology is very needed in settling paternity disputes.

It was the Delhi High Court that set the point of reference in 2008 for deciding paternity on account of a child maintenance suit. Nobody will be liable to discretionary or unlawful impedance with his security, family and home, or correspondence, nor to unlawful assaults on his respect and notoriety; does everybody have the privilege to the assurance of the law against such obstruction or assaults. In the famous case in relation to DNA investigation, K. Venkataraman, J. Veeran V. Veeravarmalle<sup>[43]</sup> is a suit by the child for a declaration that she is a legitimate child born to her parents, i.e., Petitioner and second respondent, her mother. The Court directed them to undergo a DNA test. It cannot be said to be affecting his fundamental right and is not violative of his right to personal liberty enshrined under

Art. 21 of the Constitution. Mother having remained *ex parte*. There is no question of compelling her to undergo a DNA test. DNA Test performed on the petitioner alone will prove that the petitioner is without any test conducted on the mother.

In *Neeraj Sharma v. State of Punjab* <sup>[44]</sup> the High Court observed that police power of taking samples of blood, etc., could be exercised by the Magistrate and is not violative of Article 20 (3) of the Constitution. In *Bhabani Prasad Jena v Convener Secretary, Orissa State Commission for Women* <sup>[45]</sup>, the Supreme Court provided its viewpoint regarding the High Court decision to order DNA testing of the appellant and the child, “when there is apparent contradiction between rights to privacy of a person and not to submit oneself forcibly for medical examination, the court must exercise its discretion only after balancing out the interests of the parties”.

### DNA evidence – first admissibility in India

The first Case of DNA test was from Kerala. The first case related to DNA tests was *Kunhiraman V. Manoj Singh* <sup>[46]</sup>. When the matter was brought before the Court, The CJM ordered a DNA test for the paternity of the child. The facts of this case are as follows: -

In the present case, a village girl filed a case against *Kunhiraman* for the maintenance of her child born out of her and *Kunhiraman*’s love. The court, as per section 45 of the Evidence Act, accepted DNA evidence as an expert opinion as it required scientific examination. The court ordered a DNA Test conducted at CCMB Hyderabad, and it was proved that *Kunhiraman* was the father of the child. The verdict was upheld by the Kerala High Court, which held that the DNA test is enough to prove the paternity of a child. The result of the DNA Test is conclusive in deciding paternity <sup>[47]</sup>.

### Admissibility of Forensic Evidence

Section 45 of the Indian Evidence Act, 1872 “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 handwriting [or finger impressions], the opinions upon that point of persons specially skilled in such foreign law, science or art, [or in questions as to the identity of handwriting] [or finger impressions] are relevant facts. Such persons are called experts” <sup>[48]</sup>. This ensures that the evidence being admitted is unbiased and scientific. *Ganesh v State of AP* <sup>[49]</sup> held that the opinion of an expert is admissible in evidence as it is a perfect science. In the present day, DNA evidence is considered at par with other expert opinions like forensic experts, chemical experts, and lie detectors under section 45 of the Indian Evidence Act 1872.

In the case of *Andrew v State of Florida* <sup>[50]</sup>, DNA evidence was considered significant and was admitted as compelling evidence, particularly when coupled with the fingerprint of the accused involved in the crime in 1988. Additionally, in the case of *People of the State of New York v Joseph Castro* <sup>[51]</sup>, the court established three criteria or tests to determine the admissibility of DNA evidence.

1. “Is there a generally accepted theory in the scientific community which supports the conclusion that DNA forensic testing can produce reliable results?”
2. Are there techniques or experiments that currently exist that are capable of producing reliable results in DNA

identification, and which are generally accepted in the scientific community?”

3. Did the testing laboratory perform the accepted scientific techniques in analysing the forensic samples in this particular case? <sup>[52]</sup>”

For the admissibility of DNA evidence in the United States two standards are commonly applied in the admission of DNA as evidence:

1. The Fryer Test (Established in the *Fryer vs the United States*) <sup>[53]</sup>
2. The Daubert Standard, also known as Federal Rules of Evidence (*Daubert v Merrell Dow Pharmaceutical Inc*) <sup>[54]</sup>.

In the Fryer Test, the court outlines two key requirements; firstly, a scientific technique must be generally accepted by the scientific community to be admissible in court as evidence. Secondly, it must meet the relevancy standard set forth in the federal rule of evidence. However, the US Supreme Court, in the case of *Daubert v. Merrell Dow Pharmaceuticals*, determined that the Frye Test is being supplanted by the Federal Rule of Evidence. This rule mandates that judges ensure that admitted scientific evidence is not only relevant but also reliable and trustworthy. In doing so, the court must assess the scientific validity of the testimony <sup>[55]</sup>. The Australia Crime (Forensic Procedures) Act, 2000 <sup>[56]</sup> comprehensively outline the procedures to be followed when employing forensic science in criminal investigation. Moreover, the Prum Treaty of the European Union <sup>[57]</sup> (Signed by European nations) was to enhance cooperation in combating cross-border terrorism and criminal activities and preventing illegal migration. The members of the treaty consented to share the DNA database to facilitate security.

Various countries around the globe have their legislative setup and standards to control DNA paternity testing. It is essential to the consent of the parties because it is not lawful to direct a DNA Paternity test without prior consent of the parties. The admissibility of the DNA evidence before the court always depends on its accurate and proper collection, preservation, and documentation, which can satisfy the court that the evidence which has been put in front is reliable <sup>[58]</sup>. However, there is no specific legislation which is present in India which can provide guidelines to the investigating agencies and the court and the procedure to be adopted in cases involving DNA as evidence. Due to the lack of any such provisions, an investigating officer has to face much trouble in collecting evidence, which involves modern mechanisms to prove the accused person guilty.

### Paternity test in India

In the case of *Gautam Kundu V State of West Bengal*, <sup>[59]</sup> the Hon’ble Supreme Court had given guidelines regarding the permissibility of blood tests to prove paternity:

1. “The Courts in India cannot order blood tests as a matter of course.
2. Whenever such an application is made for roving inquiry, the prayer for the blood test cannot be determined.
3. There must be a strong prima facie case in that the husband must establish no access in order to dispel the presumption arising under Sec 112 of the Evidence Act.
4. The court must carefully examine as to what would be

- the consequences of ordering the blood test.
5. No one can be compelled to give a sample for analysis”<sup>[60]</sup>.

In *Perumal Nadar V Ponnu Swami*<sup>[61]</sup> the court held that “blood examination cannot demonstrate constructive any gentleman is the father but can show absolutely that a given man could or could not be the father. It is clearly the last feature that set the blood test as the most precious in influential the paternity”<sup>[62]</sup>.

In *Sadashiv Mallika Khedarkar v Nandini Sadasiv Khedarkaer*<sup>[63]</sup>, Justice R. J Vidyath observed that there might be occasions where the couple is living respectively, and the spouse may have gone off faraway place, and after that they have a child through unlawful association. The assumption under Sec 112 of the Evidence is that the spouse can't be permitted to demonstrate that the child is not known to him since the couple are living together regardless of whether it is demonstrated that the wife had some unlawful association with someone else.

In *S Thangavelu V S Kannammal*<sup>[64]</sup>, the court held that though the court has ample power to direct parties to undergo medical tests or give samples for DNA Tests, the party who sought such relief must have a solid and prima facie case. In the landmark judgement of *K S Puttaswamy V Union of India*<sup>[65]</sup> (Known as the Privacy case), the apex court held that the right to privacy is a fundamental right guaranteed under Article 21 of the Indian Constitution. In the context of Forensic evidence and DNA Tests, when a court orders such a test, the defendant argues that such a medical examination violates the right to privacy of the defendant. However, on such point, the court has made it clear that when there is a clash between the right to privacy and submitting a sample for a test, the court must choose the path where knowing the truth is essential to save the right of the child who is incapable of protecting his right. In the case of *State of Bombay v Kathi Kalu Oghad*<sup>[66]</sup>, the supreme court held that submission of handwriting or signature, prints of palm, finger or foot does not violate Article 20(3) of the Indian constitution.

### Role of Indian judiciary

The determination of paternity holds significant legal, social, and emotional implications for individuals and families. In India, where familial structures and legal norms vary widely across regions and communities, paternity disputes are not uncommon. Traditionally, paternity was established based on social or biological evidence, such as marriage certificates or testimonies. However, with the advent of DNA profiling, courts now have access to a powerful tool for accurately determining paternity. The legal framework governing paternity disputes in India is primarily based on statutory laws, including the Indian Evidence Act of 1872, the Hindu Marriage Act of 1955, the Muslim Personal Law (Shariat) Application Act of 1937, and the Indian Succession Act of 1956, among others. These laws provide the foundation for establishing paternity through various means, including biological evidence. However, until recently, there was no specific provision addressing the admissibility and reliability of DNA evidence in paternity cases. In *Chandradevi V. State of Tamil Nadu*<sup>[67]</sup>, the accused individual was convicted solely on the basis of DNA fingerprinting evidence. Similarly, in *M.V Mahesh v. State of Karnataka*<sup>[68]</sup>, the accused was acquitted due to a

disparity between their DNA profile and the evidence recovered from the crime scene.

In the Indian scenario, the attention to the quality and capability of this strategy is yet inadequate. One of the significant insufficiencies in such a manner in this setting is that this procedure has not yet turned into a piece of the Evidence Act. The applicability of DNA Evidence confirms that the court can rely upon the practice of applicability of DNA technology. Its precise and appropriate proof can fulfil the needs of the court.

In the absence of statutory provisions, Indian courts have relied on judicial precedents to determine the admissibility and probative value of DNA evidence in paternity disputes. Over the years, several landmark judgments have affirmed the reliability of DNA profiling in establishing paternity. In the case of *Kamti Devi V. Poshi Ram*<sup>[69]</sup> (2001), the Supreme Court of India held that DNA test results can be admitted as evidence to ascertain paternity, provided they meet certain criteria, including voluntary consent and adherence to procedural safeguards. Subsequent rulings have reiterated the importance of DNA evidence in resolving paternity disputes, underscoring its role in delivering justice and protecting the rights of the child.

In *Thagrani V State of Orissa*<sup>[70]</sup>, the importance of DNA was discussed as the use of DNA as evidence in criminal investigation has grown in India in solving criminal cases and identifying criminals and even through DNA evidence, it has been proved that many convicted people are innocent. In the case of *Bhabani Prasad Jena V Convenor Secretary, Orissa State Commissioner for Women*<sup>[71]</sup> court held that:

“In a matter where paternity of a child is an issue before the court, the use of DNA test is an extremely delicate and sensitive aspect. One view is that when modern science gives means of ascertaining the paternity of a child, there should not be any hesitation to use those means whenever the occasion required. The other view is that the court must be reluctant in the use of such scientific advance and tool which results in invasion of the right to privacy of an individual and may not only be prejudice to the rights of the parties but may have devastating effects on the child. Sometimes, the result of such a scientific test may bastardise an innocent child even though his mother and her spouse were living together during the time of conception. In our view, when there is an apparent conflict between the right to privacy of a person not to submit himself forcibly to medical examination and the duty of the court to reach the truth, the court must exercise its discretion only after balancing the interest of the parties and on due consideration whether, for a just decision in the matter, DNA is eminently needed<sup>[72]</sup>.”

There is no enactment available in India that can provide rules to the offices and the court and the technique to be received in the cases, including DNA as its proof. Besides, there is no particular arrangement under the Indian Evidence Act 1872 and the Code of Criminal Procedure 1973 to oversee science, innovation, and legal science issues. Here are some of the landmark cases which have already been decided by our Indian Judiciary.

### i. Maintenance Cases

In recent times, the paternity of a child has been raised in maintenance cases. The paternity of a child is decided through DNA technology. Since there is no marriage between the parties, the judiciary cannot raise the

presumption under Section 112 <sup>[73]</sup> of the Indian Evidence Act 1872 <sup>[74]</sup>.

In such a circumstance, the legal purpose of the issue of using DNA innovation is to distinguish the organic relationship of the kid with the individual. Here and there, marriage is subsisting. However, the gatherings are in partition, and the non-access between the couple can be demonstrated using DNA innovation.

In *Nandlal Wasudeo Badwaik v. Lata Nandlal Wasudeo Badwaik and Anr* <sup>[75]</sup>, the petitioner, Nandlal Wasudeo Badwaik, and the respondent, Lata Nandlal Wasudeo Badwaik, were married in 1990. The wife claimed that a girl child was born from their marriage. However, the husband disputed the paternity of the girl child, arguing that his wife had left their marital home in 1991 and did not return. As a result, he requested a DNA test to determine paternity. The Magistrate accepted the plea of maintenance and gave a judgment in view of the assumption set down under Section 112 of the Evidence Act of 1872. Later, based on the DNA test result, it was found that he was not the natural father of the child, and the court assumed that the husband could not be compelled to accept the fatherhood of the child and made him free from the obligation of maintenance. In the present case, scientific evidence prevails over the presumption of facts.

In the case of *Kamti Devi V. Poshi Ram* (2001) <sup>[76]</sup>, *Amarjit Kaur V Harbajan Singh & Another* <sup>[77]</sup> (2003) and *Banarsi Dass V Teeku Dutta & Another* <sup>[78]</sup> (2005) The Supreme Court highlighted the fact that there is no provision in Indian Law to force anyone to undergo blood tests or any type of DNA testing. The court gives priority to social parentage over biological parentage and thereby rejects DNA evidence by observing that the result of a genuine DNA test is said to be scientifically accurate; it is not enough to escape from the conclusiveness of section 112 of the Evidence Act <sup>[79]</sup>.

In *Sharda V. Dharmpal* <sup>[80]</sup>, However, the Supreme Court of India took a very positive response towards the admissibility of DNA evidence in matrimonial cases. Having regard to the future of the child has, of course, sounded a note of caution as regards the mechanical passing of such order. The court, after discussion, summed up 3 conclusions:

1. "A matrimonial court has the power to order a person to undergo a medical test.
2. Passing such an order would not violate the right to life under Article 21 of the Constitution.
3. However, the court should exercise such cases where prima facie the case and there is sufficient material before the court. If the person refuses to undergo a test without a valid reason, then the court can draw an adverse inference against him" <sup>[81]</sup>.

## ii. Rape Cases

After the introduction of DNA innovation, the blame is effectively distinguished in assault and murder cases. In assault cases, the organic examples recuperated from the casualty can be utilized as solid incidental proof to demonstrate the blame of the denounced among alternate conditions. In *Kamalananda and Others V. State of Tamil Nadu* <sup>[82]</sup>, in the present case, a spiritual guru repeatedly raped his disciples for several months. Here, DNA innovation assumes an imperative part to interface the criminal with that of wrongdoing in a precise way. The courts conceded that the DNA report was a solid and exact

one. Here, DNA confirmation assumes a critical part, and he was charged with rape.

In *Geeta Daha V. NCT of Delhi (DB)*, <sup>[83]</sup> The DNA test was performed on the casualty. Division Bench of the Supreme Court held that DNA tests can be done on the embryo of Rape victims. In *D. Rajeshwari V State of Tamil Nadu and others*, <sup>[84]</sup> in the present case, a young lady was captured and rapped a few times by a few people at various intervals before her escape from their grip. The young lady wound up pregnant. The police did not listen to her, not making a move. She drew closer to court to permit the end of her pregnancy. For a situation of assault, the court considers it fit to direct the restorative end of pregnancy and save the hatchling to empower the examination organization to request a DNA test.

In the case of *Krishna Kumar Malik v State of Haryana* <sup>[85]</sup>, the court held that after the incorporation of section 53 (A) to the CrPC in 2005, the investigating authority must collect DNA in a rape case. In *HP v Jai Lal*, the court held that though there is no explicit definition of a DNA test in any statute, it can be included in the chapter on expert opinion of the Indian Evidence Act.

## iii. Murder Cases

These days, DNA fingerprinting is being utilized to distinguish damaged, dead bodies, as was done in the WTC assault or after the seismic tremor in Gujarat. It is likewise used to accumulate essential data about and to recognize the psychological oppressors slaughtered in an experience as was done in the Akshardham assault or after the assault on the Indian Parliament. In the wake of checking the DNA proof found at the site of WTC, agents could distinguish the pioneer of the fear-based oppressors and build up his connections with Al-Qaida. Unlike the Civil Proceedings or paternity questions, the Criminal Courts in India also acknowledged DNA tests.

In the *Rajiv Gandhi Bomb Blast* <sup>[86]</sup> case, the DNA test of the claimed professional killer, Dhanu, was contrasted with her relatives, which gave solid confirmation of her contribution to the wrong doing. In the famous case of *Sushil Sharma V. The Delhi Administration* <sup>[87]</sup> (otherwise called the Tandoor Murder Case), the DNA test of Naina Sahni was done with her family member Harbajan. The DNA report affirmed that the burned body is that of Naina Sahni.

In the *Santosh Kumar Singh v State through CBI* <sup>[88]</sup> (known as *Priyadarshani Mattoo Case*), the court held that DNA profiling proves to be a bane; it further helps to prove the guilt or innocence of the accused, however tempering with the evidence gives the case a different direction. As a result, the court has no option but to grant the accused the benefit of the doubt.

In *Dharam Deo Yadav v. State of Uttar Pradesh*, <sup>[89]</sup> The denounced Dharam Deo Yadav as a local guide in Varanasi. The expired Diana came to India in the year 1997. She remained in Old Vishnu Guest House, Varanasi. She went out on 10.08.1997, and from that point, she was discovered missing. Her father, Allan Jack Routely reported about the missing of her girl Diana. The group of cops was coordinated to ask about Diana, yet she couldn't be found. At last, the police came to realize that one Dharam Deo Yadav, a local guide, had a few contacts with Diana. The police group, at that point, presented its answer to the Superintendent of Police in Varanasi on 29.04.1998. The

charge admitted that he had conferred the murder of Diana alongside his 3 co-partners. The after-death examination was directed. Afterwards, the skeleton was additionally recognized as that of Diana following a DNA test by Dr G. V. Rao, CDFD, Hyderabad.

The Supreme Court held that DNA could not be altered despite the passage of time. In the present case, the DNA test plays a crucial role in identifying the deceased Diana. Considering this, it can be said that DNA profiling is highly beneficial in homicide investigations when all other investigation strategies fail.

#### iv. Assassination Case

In assassination cases, the identity of the accused, as well as the victim, can be identified using DNA technology. In the State of Tamil Nadu v. Nalini and Ors<sup>[90]</sup>, This is broadly known as the Rajiv Gandhi Assassination case. Rajiv Gandhi, who was a previous Prime Minister of India, was executed by a suicide plane. The prime guilty party was slaughtered herself, and therefore, most material confirmations were demolished in the colossal blast. Additionally, dead assortments of the casualty and, in addition, the professional killer were eviscerated to the point of being indistinguishable. DNA tests helped in coordinating dismantled parts of the collections of the casualty and professional killer.

#### Conclusion

Since the discovery of DNA fingerprinting technology in 1985, it has been exclusively used by courts of every country worldwide. In India, the first DNA fingerprinting technology was used in 1989, and to date, DNA Technology has resolved a large no of paternity and maternity disputes. For the last half a decade, India has note nacted legislation on DNA Technology so that proper guidelines can be followed to carry out a test so that a proper balance can be established between technology and Law. The DNA Technology (Use and Application) Bill 2019 is pending before parliament and is a right step toward the right direction in solving unsolved social-legal issues with the help of technology. It can be said that DNA testing is more reliable, and it can bring the truth before everyone without any error. It is more accurate and precise.

The application of DNA profiling in paternity identification has significant judicial implications. It provides an objective, scientific method for resolving paternity disputes and plays a crucial role in ensuring that the rights and responsibilities of both parents and children are upheld. DNA profiling has revolutionized the way paternity cases are handled in the legal system, providing a more accurate and reliable method for determining biological parentage. The reliance on DNA profiling in paternity cases has greatly reduced the margin for error and has significantly decreased the chances of wrongful paternity determinations. This has ultimately led to more just outcomes and contributed to the overall integrity of the judicial system.

In law, the 'authenticity' is the status of a child destined to guardians who are in a 'lawful Nuptial relationship' with each other. This Legal relationship could be a 'lawful Nuptial marriage' or a 'legitimate live-in relationship' as being acknowledged in the public eye and additionally by law in numerous nations, for example, the UK, USA, Philippines and most as of late, in India. Customarily, in India, authenticity and marriage are laced and birth amid

marriage is considered a convincing confirmation of authenticity and paternity under Section 112 of the Indian Evidence Act 1872.

In this way, there is an excellent need to hone extraordinary alert while involving the DNA as proof during the time spent conveying equity, especially in nations like India where criminal equity framework is affirmed to endure degenerate pathologies at different phases of conveyance of equity. Before endeavouring to make the DNA enactments, India must plan thorough quality affirmation and accreditation programs for DNA testing for actualizing the DNA proof in common and criminal investigative uses with the goal that an unmistakable refinement could be made between human blunder, endeavoured extortion (which are uncommon cases and should be identified via cautious examination of the case's conditions), and specialized disappointments which should by identified by nearly checking every single systematic process.

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