



Use of DNA as an Evidence in India

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Highlights:

- DNA fingerprinting is widely utilised in courts for both civil and criminal cases globally.
- In criminal instances, DNA evidence should be utilised as corroborating evidence rather than definitive proof.
- While DNA evidence is used in Indian courts for both civil and criminal cases, there is currently no legal framework for DNA profiling.
- India has been seeking to legislate on DNA profiling for nearly a decade, with a bill currently pending in Parliament.
- This essay examines the implications of DNA admission as 'evidence' in Indian courts.

Abstract:

Ever since DNA fingerprinting technology was discovered in 1985, it has been widely utilised as evidence in legal proceedings worldwide, proving an individual's identification in both civil and criminal cases. In 1989, the first parental dispute in India was resolved by the application of DNA fingerprinting technology. Since then, DNA technology has been utilised for forensic identification of wildlife as well as the resolution of paternity and maternity issues. It has also been utilised to establish an individual's identity in a number of criminal cases. India has been working for the past five years to pass legislation governing the use of DNA in court cases, and the "Human DNA Bill-2012" draft is now sitting in the parliament. Forensic DNA testing proponents have largely assumed that DNA testing is almost perfect and that DNA technology represents the single biggest advancement in the hunt for the truth, the conviction of the criminal, and the exoneration of the innocent. This article explains the implications of DNA testing being accepted as "evidence" in court and gives a thorough overview of the state of DNA testing in India. Given the current state of civil and criminal laws, as well as shifting moral and cultural perceptions, it is clear that India's and the world's DNA laws require careful consideration.

Highlight:

DNA testing has become a crucial tool in the field of forensic science and legal investigations globally, including in India. Its utility spans across various domains such as criminal justice, paternity disputes, and identification of remains, among others. Here's an in-depth look at the role and implications of DNA testing as evidence in India.

India's DNA testing History:

background **and** **present** **circumstances**

A paternity issue case was the first in India to be resolved by DNA fingerprinting technology. DNA fingerprinting was used in 1991 to resolve a paternity issue (Kunhiraman vs. Manoj, II (1991) DMC 499). Since then, many of civil and criminal cases have been resolved using technology, including several well-known and dramatic ones, such as the assassination cases of Sri Beant Singh and Sri Rajiv Gandhi, the Naina Sahani Tander case, Swami Premananda, and Swami

Legal Framework and Acceptance:

Criminal Justice System

In India, the use of DNA evidence in criminal cases has seen a gradual but steady acceptance. The Indian Evidence Act of 1872 does not explicitly mention DNA evidence, but sections dealing with expert testimony (Section 45) and relevant facts (Section 9) have been interpreted to include DNA evidence. Courts in India have increasingly relied on DNA testing to solve complex criminal cases, particularly in identifying perpetrators in rape and murder cases. High-profile cases, such as the Nirbhaya gang-rape case, have prominently featured DNA evidence, which has bolstered its credibility and acceptance in the legal system.

Paternity and Custody Disputes

DNA testing is also commonly used in civil cases, especially in matters of paternity and child custody. The Supreme Court of India, in various judgments, has upheld the validity of DNA tests in establishing paternity, emphasizing the scientific reliability and accuracy of such tests. However, the courts also weigh the right to privacy and the potential social implications before mandating DNA tests.

Regulatory and Ethical Considerations:

DNA Technology (Use and Application) Regulation Bill, 2019

To regulate the use of DNA technology, the Indian government introduced the DNA Technology (Use and Application) Regulation Bill, 2019. The Bill aims to establish a regulatory framework for DNA testing, ensuring that the collection, storage, and use of DNA samples are done ethically and legally. It proposes the creation of a National DNA Data Bank and Regional DNA Data Banks, along with the appointment of a DNA Regulatory Board to oversee the processes. The Bill also outlines the consent required for DNA testing and safeguards to protect individual privacy.

Ethical Concerns

While DNA testing is a powerful tool, it raises significant ethical concerns. Issues such as consent, privacy, and potential misuse of genetic information are paramount. In India, these concerns are particularly acute given the diverse socio-economic landscape and the potential for misuse of DNA data for discriminatory purposes. The proposed DNA Technology Bill attempts to address these issues by setting stringent guidelines for the use of DNA data and ensuring that individuals' rights are protected.

Technological and Infrastructural Challenges

India faces several challenges in the widespread implementation of DNA testing:

Laboratory Infrastructure

The country has a limited number of accredited forensic laboratories capable of conducting advanced DNA testing. These labs are often overburdened with cases, leading to delays in obtaining results. Enhancing the capacity and number of forensic labs is crucial for the timely and effective use of DNA evidence.

Training and Expertise

The accuracy of DNA testing heavily relies on the expertise of the personnel conducting the tests. In India, there is a need for more trained forensic scientists and technicians who can handle DNA evidence proficiently. Continuous training and upgradation of skills are essential to keep pace with advancements in DNA technology.

Impact on the Judicial Process

The introduction of DNA evidence has had a transformative impact on the judicial process in India:

Speeding Up Trials

DNA evidence can provide conclusive results that expedite the judicial process. In many cases, it has helped in quick identification of perpetrators, thus speeding up trials and reducing the backlog of cases in courts.

Reducing Wrongful Convictions

One of the significant benefits of DNA testing is its potential to reduce wrongful convictions. By providing concrete scientific evidence, DNA tests can exonerate individuals who have been wrongfully accused, thus ensuring justice.

Future Prospects:

Expansion of DNA Databases

With the proposed regulatory framework, India is likely to see an expansion in the use of DNA databases for solving crimes. These databases can significantly aid in identifying repeat offenders and solving cold cases.

Advancements in Technology

Advancements in DNA sequencing technology and the development of rapid DNA testing methods hold promise for even more accurate and quicker results. As technology evolves, its integration into the Indian legal system will likely deepen, providing robust support for law enforcement and judicial processes.

Conclusion

DNA testing as evidence has revolutionized the legal landscape in India, providing a scientific and reliable method for solving crimes, resolving paternity disputes, and identifying unknown individuals. While the potential of DNA testing is immense, it must be balanced with ethical considerations and robust regulatory frameworks to ensure that it is used responsibly and justly. The ongoing efforts to regulate and enhance DNA testing infrastructure in India are steps in the right direction, promising a future where justice is more accurately and swiftly delivered.

