

SCOPE AND LIMITATION OF NARCO ANALYSIS AND DNA PROFILING TECHNOLOGY IN INDIA

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ABSTRACT

In India's adversarial judicial system, which demands investigators to gather evidence, the presumption of innocence is one of the most essential legal concepts. In the wake of the revelation DNA is the universal genetic material and the subsequent elucidation of DNA's structure, scientists has been compelled to put this newly acquired information to use in ways that could anticipate in criminal jurisdiction. On the other hand, Narcoanalysis results are not recognised in the legal system in India. But, there have been a number of court decisions that have cast doubt on the methodology behind how the Narcoanalysis test obtains essential data. The importance of Narco-analysis testing in criminal investigations cannot be overstated. Nothing in the Indian Evidence Act of 1872 indicates that a Narco analysis test uses scientific methodology. In India, the use of Narco-analysis tests as an interrogation strategy has been extensively debated. The paper's goal is to recommend that the judiciary operate in accordance with its basic obligation of providing justice using DNA and Narco analysis by technologies in India's court system administration and by analysing the scope and limitations of Narco analysis and DNA profiling in judicial procedures.

Keywords: DNA, Narco analysis, evidence, witness, Constitution of India

1. Introduction

Recent developments in the understanding of science are making it easier to track down criminals and bring them to integrity. Recent advances in scientific methodology have made it possible to acquire more accurate results from on-going investigations by employing novel approaches such as DNA profiling, Narco analysis, figure printing, brain mapping and P300 tests. Additionally, these developments have made it simpler to carry out examinations such as DNA fingerprinting and Narco analysis [1].

The major purpose of this research is to carry out an in-depth evaluation of the techniques of Narcoanalysis and DNA profiling that is currently being used in India.

1.1 Background

The process of identifying a person has advanced to a new level of precision thanks to the use of DNA profiling, which is more accurate than fingerprinting [2]. Using this kind of profiling, it is particularly helpful in the field of criminal law to be able to detect whether or not blood or sperm deposits found at the scene of a crime are those of the suspect. As a result, it is possible that it will be beneficial if blood, hair, or other bodily fluids belonging to a suspect are found at the scene of a murder or in a dispute about paternity [3].

When Calvin Goodard first started using the phrase "Truth Serum," he was referring to a medication that doctors had traditionally prescribed to patients suffering from mental illness [4] but in the present era the test is administered to an individual who is only partially aware which called as the Narcoanalysis. In spite of the fact that the Constitution of India does not place any specific restrictions on Narcoanalysis testing, the examinations and interviews of suspects may be carried out in Forensic Laboratories, which have a restricted number of OT facilities [5].

2. Literature Reviews

According to Gotham, Kevin Fox, and Daniel Bruce Kennedy [6] using actual court cases and forensic criminology expert witness evidence, the paper demonstrate the necessity of criminological knowledge in civil law and the courts. Practice Forensic Criminology serves as an introduction to the ever-evolving field of Forensic Social Science. To help judges and juries reach legal decisions, forensic criminologists could use their research and teaching abilities. Identification, characterization, and labelling of the "criminal" are fascinating and effective approaches for gaining an understanding of crimes against the ideals of society. By studying Forensic Criminology, students can better understand

the various modes of data collection and analysis that are used in the criminal justice system today.

The article "Three decades of DNA evidence: judicial perspective and future challenges in India. Written by Goswami, [7] G. K., and Siddhartha Goswami the author stated that the adversarial system of law in India requires the state to acquire evidence before charging a suspect, and presumption of innocence is a fundamental principle of the system, which follows. Because of this, the Narco Analysis test poses a number of legal as well as ethical concerns. Controversy abounds over whether or not this test violates an individual's constitutionally granted basic rights. In addition to violating one's right against self-incrimination, this test raises concerns about one's "right to human dignity" and their "inviolability". The main and most important question in each case involving human rights is addressed through the use of Narco Analysis. Using this approach as an investigative tool raises legitimate issues about the legal situation, such as "infringement of an individual's right", "personal freedoms" and "freedom". Article 20 (3) of India's Constitution has also been used as a reason to hold this action in contempt [8].

Also, Author Sahu, Pratyasha in the paper "Narco-Analysis Test: An Analysis [9] explained that the assumption of concept of innocence is important to India's adversarial legal system, which mandates that investigators have a responsibility to gather evidence. India does not recognise Narco-analysis tests since they are performed by a semi-conscious individual, and hence they are not acceptable in court. But the court might allow restricted admission after taking into account the circumstances of the test's attainment. The law states that compelled evidence is not admissible in court. But there is a distinction between being compelled to provide information and being forced to provide it (Bombay v Kathi KalyOghad). Forced to do anything because of injury, assault, incarceration, or threats against the accused's family members is said to be under duress, according to the legal definition of duress. According to investigation, the "Narco-analysis" test does not include coercion or

pressure. However, if we look at it from a different angle, the constitutional protections guarantee protection against being forced to be a witness and against being forced to provide testimony against oneself as a consequence of such a compulsion (Hovarth vs. The Queen, 1979).

Conversely author, Dhull, Jayantikain the journal Utilisation of Forensic Science in the Indian Criminal Justice System: An Empirical Study By Critical Analysis Of Decided Cases[10] Stated that a lack of consideration of the law is the reason why courts in India have ruled in favour of the tests. In spite of the fact that the tests may be necessary, the legal authorization for some of them is difficult to come by, and substantial precautions must be put in place to avoid their misuse. Such criteria must be defined in conjunction with those rights that are impacted, or the other way around, by the Supreme Court.

2.1 Research Gap

Prior to its publication, many papers failed to meet certain requirements related to the chosen topic. These include the fact that the goal of the work done is to fill in these gaps by providing logical and persuasive arguments. DNA profiling and Narcoanalysis in India's judicial system. Moreover, Article 20 of Indian Constitution must be studied to fill in the gaps that have been identified, including their origins, motivations, methods, and effects on the country's justice system. Another key need in India's infrastructure is the determination of the extent and limits of Narcoanalysis and DNA profiling technologies for use in judicial proceedings.

2.2 Research Question

1. What are the origins, implications, techniques, and impacts of Narco analysis and DNA profiling technologies in India's court system administration?
2. What are the scope and limitations of Narco analysis and DNA profiling technologies in Indian judicial procedures?
3. What are the appropriate recommendations for the judicial executives to operate in accordance with their basic obligation to deliver justice utilising DNA and Narco Analysis?

2.3 Importance of the Study

The study is essential because it intends to provide light on constitutional protections of individual rights, the use of DNA and Narco Analysis, and other relevant legal issues. This initiative has been initiated to shed light on the pros and cons of emerging technology and the policies that regulate them. According to the outcomes of this study, researchers have also examined how the executive can best fulfil its core responsibility to safeguard society, as well as how the present legal system can provide justice to crime victims utilising DNA and Narco Analysis.

2.4 Research Objectives

1. To investigate the origins, implications, techniques, and impacts of Narco analysis and DNA profiling technologies in India's court system administration
2. To analyse the scope and limitations of Narco analysis and DNA profiling technologies in Indian judicial procedures.
3. To recommend the judicial executives to operate in accordance with their basic obligation to deliver justice utilising DNA and Narco Analysis.

2.5. Scope and Limitation

The breadth and limits of DNA profiling and Narco analysis are the exclusive focus of this work. Indian law and regulations are confined to the constitution which is one of the considerable limitations of the paper. Typically, the article focuses on concerns pertaining to the use of DNA and Narco Analysis, along with rights given by constitutional law and general legislation. It is intended to illustrate the advantages and disadvantages of current fragmented criminal legislation and related laws.

3. Research Methodology

This chapter provides an explanation of how the technologies used for Narcoanalysis and DNA profiling in India were appraised for their scope and limits in India. In this chapter, the specific inquiry functions and comprehensive methodologies take into consideration all of the study's targets and hypotheses [11]. To put it another way, the first chapter of the research paper outlines an obvious plan for addressing

the problem that is discussed in the second part of the research paper. Finding and explaining the fundamental causes of a phenomenon in order to make educated guesses about the phenomenon's potential future course is one of the major goals of research [12].

3.1 Research Method & Design

The collection of data is one of the most important aspects of scientific or social research, and a researcher has to decide on a strategy for doing this step that will allow them to achieve the objectives of the study or, if relevant, test their hypotheses. The researcher is provided with instructions on how the study areas should be set up thanks to the research strategy [13]. Because the researchers utilised an analytical method, they have a deeper comprehension of the findings than they would have had if they had relied on a descriptive approach. The purpose of this research is to investigate the capabilities of Narco analysis and DNA profiling technologies in India, as well as their limits [14].

3.2 Research Approach

Throughout the whole of any research endeavour, there need to always be a place for free debate, regardless of the subject matter. The inductive, deductive, and abductive processes all need to be clarified for the methodological component of this dissertation. In this research article, the hypothesis theory will be tested using a mix of inductive and deductive reasoning, which will ultimately lead to the establishment of a new theory [15]. When these methods are put into practise, the descriptive pattern of analysis takes into consideration the data gathered via observations.

4. Analysis of Study

- a. *What are the origins, implications, techniques, and impacts of Narco analysis and DNA profiling technologies in India's court system administration?*

The criminal justice system involves multiple procedures, organisations, with the objective of sustaining or re-establishing the social control system. In other terms, it's "the structured or systematic way in which society reacts to certain activities and persons it deems to be

aberrant." [16] A well-oiled criminal justice system is crucial to a peaceful society. Forensic science may make a considerable contribution to justice in criminal investigations and other large crimes by working within the boundaries of the legal system [17]. The identification of evidence and the retrieval of evidence at the site of the crime could give correct information in criminal and civil cases.

IN TWO YEARS

- FSL handled 1,727 cases of cyber crimes, and analysed 33,743 samples.
- 72 cases of narco-analysis were done and 131 persons were put through narco-analysis tests
- Polygraph tests were done on 79 persons in 43 cases

Figure 1 Cases related to DNA and Narco analysis

There has been a significant rise in the use of DNA profiling and Narco analysis in criminal and civil cases over the last two decades. Unlike with a blood relative, no two persons, even identical twins, have the exact same DNA. It is thus possible to connect or exonerate a suspect using DNA evidence acquired from the site of an incident that has occurred [18]. DNA evidence has legal legitimacy since 1989, according to the most recent Indian government stance, although no particular legislation exists to address it. In India, *Kunhiraman v. Manoj*[19] was the first paternity case where DNA proof was necessary. Forensic specialists, ballistic experts, biological experts, chemical experts, document writers and lie detectors are all considered experts in their own right when it comes to DNA evidence in the courts.

FBI employs DNA profiles, which makes use of computer and DNA technology to help in DNA profiling comparison. Semen or blood found at the site of a crime might be used to develop new leads in the investigation [20].

In recent years, the criminal court system has also relied on genealogical databases to identify potential suspects. It has been said that the DNA profiling approach is one of several types of medical the revised explanation of CrPC sections 53-A and 54-B reveals [21]. A

DNA profile is distinct from a DNA sample acquired from a body material, since the latter is more difficult to acquire. According to Article 20(3) [22] of the constitution, it is not testimonial act or coercion to utilise material samples such as fingerprints for comparison and identification. As a result, in India, there are no constitutional restrictions on the collection and storage of DNA samples that are considered tangible evidence. See *Smt. Selvi Vs. State of Karnataka*[23].

Narcoanalysis, on the other hand, combines hypnosis with narcosis. For the Indian government, Narco analysis is a helpful and non-invasive tool for investigating and preventing crimes and may be extremely beneficial for interrogating suspects, if utilised in a scientific manner," says Dr. S.L. Vaya, Deputy Director of DFS, Gandhinagar, Gujarat [24]. In India, Narco-analysis has risen to prominence as a preferred method of criminal investigation. Scientific medications are used to induce a person into a state of semi-sleep, which is then used as a kind of psychotherapy. Intrusion into the subject's neurological system is used to enable the subject's self-consciousness to fade. As a result of the subject's inability to tell the truth when under the influence of drugs, investigators make an effort to get information in the form of clues about the crime [25].

Although, the defendant has been given the right to remain silent as a result of the decision in the *Nandini Sathpathy v. P.L. case* [26]. Forcible entry into one's thoughts is reinstated via the execution of Narco analysis tests, rendering the Right to Silence invalid and illegitimate. She argued that Article 20(3) of the Constitution and Section 161(2) of the Cr. P.C [27]afforded her a right of silence.

The Madras High Court concluded in *Dinesh Dalmia v State (2006)*[28]that submitting an accused to Narco-analysis does not equate to evidence under force. According to an earlier Supreme Court decision (*Selfie and Ors vs Karnataka and Anr*), [29] involuntary administration of some scientific procedures to improve criminal investigation efforts was deemed unconstitutional. According to the Supreme Court decision in the above-mentioned case, the use of brain mapping and polygraph testing as part of a criminal

investigation is illegal. In 2005, the Code of Criminal Procedure, 1973 [30], was revised to make it easier for police to collect a wide range of medical information from suspects after they've been detained. There are "reasonable grounds" for assuming that an examination of an accused individual would provide evidence of the offence under Section 53 of the 1976 Criminal Procedure Code [31].

b. What are the scope and limitations of Narco analysis and DNA profiling technologies in Indian judicial procedures?

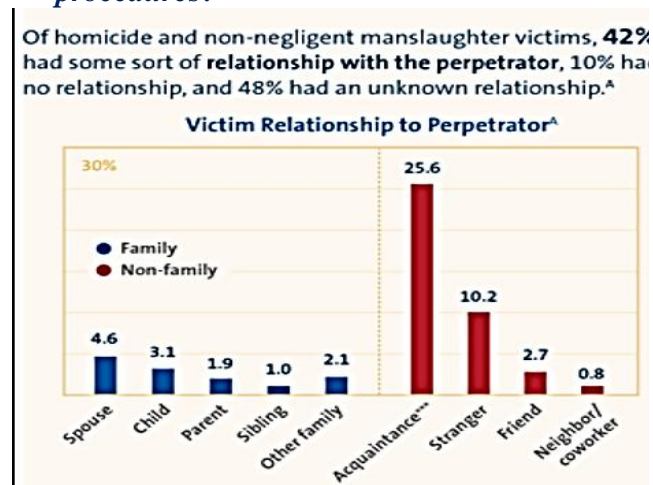


Figure 2 Cold cases solved using DNA mapping

Scopes and limitations of DNA

In spite of the numerous practical applications of DNA profiling, there are significant limitations. The ethical ramifications of capturing criminals using DNA searches on their families have previously been highlighted as exemplified in the *Wisconsin case*[32]. Most individuals who use genealogical sites don't realise that law enforcement may demand their data, as reported in Nature; a scientific journal published five days a week.

As a result, there are additional issues of ethics and privacy when it comes to preserving DNA data from offenders. It's possible that retaining a person's DNA after they've been convicted of a crime is an affront to their fundamental right to personal privacy [33].

According to the MIT Technology Review, massive databases like the one used to track down the Golden State Killer are "national security leaks waiting to happen." A person's DNA cannot be replaced, as contrast to, say,

and a credit card. Using millions of Americans' DNA profiles from a database, the paper contends, foreign intelligence may discover the genuine identities of American diplomats and spies, as well as the families of those individuals [34]. They might also identify potentially damaging political material. As far as we know, this hasn't occurred yet. However, this is a very real possibility. Both the technology and the data are available.

The process of DNA profiling is also a source of worry. Despite its accuracy, it is not completely infallible. There may be numerous persons that have a partial DNA profile, thus it should not be used as definitive proof [35]. Misstatements in the administration of justice may result from the improper use or interpretation of DNA evidence. As recently as 2011, a careless lab error led to an innocent man being charged with rape because his DNA was mistakenly discovered to match the victim's sperm. Subsequent investigations revealed a file mix-up at the lab [36]. To put it another way, DNA is simply one piece of the criminal justice jigsaw and should not be relied on in place of other investigation and analytical methods [37].

Scopes and limitations of Narco- Analysis: Admissibility of Narco-analysis in the court

While Narco-analysis provided a wealth of information, it also sparked a number of issues from opponents who were sceptical about the use of serum to extract truth from witnesses. The use of Narco-analysis as a tool or help in gathering and bolstering evidence is not uncommon. Yet questions remain about the extent to which it violated human rights, including the freedom of the person to testify against his or her will. Narco-analysis and P300 tests are not acceptable as evidence in court, according to lawyers, who argue that semiconscious confessions cannot be used in a court of law. Narco-analysis test results are acceptable in court when the circumstances of their acquisition are taken into account and their admissibility is examined, although they do not have complete validity [38]. Results of such tests can be used to get admissible evidence, can be collaborated with other evidence or to support other evidence. Nonetheless, if this test's results are not

admissible in court, they cannot be used to corroborate any other evidence gathered during regular inquiry.

In the *Godhra atrocity case* [39], Narco-analysis was employed for the first time in India in 2002. When Arun Bhatt kidnapping suspects came before India's Supreme Court and the National Human Rights Commission (NHRC) to oppose Narco-analysis, it made headlines. When Abdul Karim Telgi was put to the test in December 2003, the Telgi stamp paper fraud was once again in the headlines. But even though Telgi generated an enormous quantity of information, there were concerns regarding its validity as proof [40]. Nithari village (Noida) serial murders drew attention to Narco-analysis. Mohinder Singh Pandher and Surendra Kohli, the two major suspects in the Nithari serial murders, have been tested for Narco analysis in Gandhinagar, Gujarat [41].

Criticism of Narco-analysis test

This method has been called into question on the basis that it isn't 100% accurate. Certain subjects have been proven to have made fraudulent statements. As a result, it should not be used to compare a statement made to the police before to the use of drugs with one made after. Even after the medicine was administered, it was discovered that a person who had submitted false information had been caught. It doesn't assist much when dealing with liars or those who are evasive and dishonest [42]. It is quite difficult to recommend the right dosage for a certain individual. When it comes to the amount of medication that a person should take, it all depends on their level of motivation, mental attitude, and physical condition. For Narco-analysis to be successful, injection is not required. In order for this to work, you'll need an interviewer with experience and training in posing effective and up-to-date questions. The purpose of a Narco-analysis test is to bring back memories that the suspect has lost. If the test is being used to get confessions to crimes, the accuracy of this result may be called into question [43]. While under the influence of Narco analysis, suspects of crimes may purposely suppress information or offer a false version of the occurrence. The use of Narco-analysis in a criminal inquiry is not

encouraged. The application of Narco-analysis in medicine, including as the treatment of mental illness, may be beneficial. The test should not be utilised in a criminal investigation unless it is done with the permission of the suspect [44].

c. What are the appropriate recommendations for the judicial executives to operate in accordance with their basic obligation to deliver justice utilising DNA and Narco Analysis?

An extensive database is needed in order to estimate the relevance and likelihood of a match in a certain community. An effective criminal justice system must strike a balance between the need to safeguard individual freedoms and the state's interest in apprehending, punishing, and convicting criminals while also ensuring due process and due process rights are not violated. Regardless of how or where a DNA sample was collected, individuals have the right to expect privacy when it comes to its content [45]. As a result, there is a pressing need for comprehensive laws and the establishment of a National DNA Database. It's just a matter of time until law enforcement authorities use database systems to their advantage [46].

The criminal justice system is backed up by a glut of unanalysed forensic science and biological evidence from crime scenes, notably in cases of sexual assault and murder. Unanalysed crime scene samples are often kept in police and crime laboratory storage facilities. It is possible that tragic results may be prevented if these samples are quickly analysed and submitted into DNA databases. However, DNA profiles may considerably improve the chance that future crime victims will be spared the suffering of violent, repeat offenders [47]. Five years from now, the current backlogs will be cleared because to this enhanced federal backlog reduction monies, the financing provided by this project to improve crime laboratory capacity, and continuous cooperation from the states.

Because of the Apex court's decision to invalidate the validity of the Narco analysis test and the admissibility of Narco-analysis, the chance of justice has diminished. For serious crimes, it is recommended that a Narco-

analysis test be made mandatory for the accused and witnesses in order to improve the quality of criminal justice by enhancing evidence collection. With this shift, the criminal justice system will be transformed [48]. However, the Narco-analysis test's validity is called into doubt by the accused's demands for justice. When the investigation fails, the Narco test might be considered unethical. The presumption of innocence should be maintained throughout the course of any criminal inquiry.

While Narco-analysis may assist convict the guilty as well as the innocent, it has shown to be an effective tool in criminal investigations. This criterion should not be used in all cases if the general welfare is at risk. Newer and more advanced techniques should replace the third-degree questioning practise. The standards of criminal procedure, evidence, and institutional infrastructure that were in place more than a century ago do not apply in today's scientific world. Those that commit crimes in the present day do so by taking advantage of advances in science and technology [49]. Thus, it has become necessary to reconsider what makes for an efficient criminal justice system, as well as ways to enhance it.

5. Results

There is also a broader concern that the law may not keep pace with advances in genetics and may not be able to adequately protect the privacy of individuals from the inappropriate use of genetic information. Both of these concerns relate to the possibility that the law may not be able to adequately protect the privacy of individuals [50]. Both of these issues are related to the danger that the law may not be able to guarantee the privacy of persons in the manner that is necessary. This suggests that, on the one hand, there is a significant level of support for improved medical treatments and for providing helps to law enforcement, but, on the other hand, there is a broad anxiety about privacy, health, and genetic prejudice [51].

The empirical evidence and the statistics are sources that the courts use while reaching their conclusions. Because of this, scientists are able to have trust in the discoveries that are generated by scientific procedures, which are

used to gather vital information related to crime [52]. This is because these methods are used to collect critical information of a crime scene.

For ensuring the integrity of the criminal justice system, DNA testing is becoming more vital, according to the results. An enhancement in the accuracy of the criminal justice system may be achieved by better equipping forensic laboratories, developing faster methods of analysing DNA evidence and improving the training of DNA specialists. Keeping dangerous offenders off the streets and preventing innocent individuals from being wrongly accused or imprisoned is only one of the many benefits of these processes [53].

Performing a Narcoanalysis on someone while they are unconscious exposes them to mental factors that may be exploited by the investigating agency; hence the test has no legal standing. This means that the evidence cannot be utilised in court. Individual liberties and rights may be violated if this test is utilised as an aid in criminal investigations. The Supreme Court never officially prohibited the use of this test in criminal investigations, but the Indian Judiciary has consented to its limited and confined usage [54]. Criminal investigations involving several suspects may benefit from scientific processes like Narcoanalysis, which can be used to determine whether or not a suspect gave an accurate statement while also promoting public safety and a society free of crime.

6. Conclusion

Thus from the analysis of the above research paper it can be interpreted that individual liberty and freedom are inherent in the current criminal justice system when it comes to self-incrimination, but it is impossible for offenders to escape a safe passage owing to the weakening of the criminal justice system due to the existence of DNA mapping and Narco analysis in criminal investigation. Courts are increasingly reliant on forensic evidence to unearth the truth. This is in part due to the fact that the data created by these methods is dependable and easy to store, search for, and analyse enormous volumes of genetic data. The conclusions reached via the execution of these

processes are routinely put to use in both criminal and civil proceedings.

6.1 Future Scope

It has been proposed that future study need to concentrate more on the historical backdrop of the development of DNA mapping and Narco analysis inside the Indian court system. In addition, the article will touch on the positive and negative effects that these technologies based on foreign sciences have on the individuals who are under suspicion, as well as how it restricts their individual rights.

6.2 Suggestions

The current federal and state DNA collection and testing systems for Narco Analysis should be improved. More research is needed in the legal realm on faster methods of examining DNA evidence and Narco analytic techniques. Those in the criminal justice system who are tasked with using DNA evidence and Narco analysis to help solve crimes and assist victims need more resources. For people who feel they were wrongly convicted, the criminal justice system requires DNA testing and Narco analysis in appropriate circumstances.

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