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Forensic Science's Impact: DNA tests and Narco-Analysis evidentiary relevance

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Forensic science is the field of science that applies physics, chemistry, biology, computer science, and engineering to legal issues. It aids in the investigation and conviction of offenders, as well as establishing people's innocence, by allowing for more efficient and accurate analysis and examination of crime evidence. Forensic science has made a significant impact in assisting justice in criminal investigations and various other violent crimes such as rape, murder, and homicide. The primary purpose of this discipline is to give direction to law enforcement, the judiciary, and the general public in order to ensure a fair and impartial prosecution. Police are attempting to catch the criminal, recreate the crime scene, and identify and apprehend the suspected criminal, thanks to current technological advancements. The courts use this information to make important connections and determine whether the defendant is guilty or innocent. However, the criminal justice system remains one of its most valuable assets. Also, because crime has existed from the dawn of time, so have the tactics employed to identify the perpetrator. In India, keeping the fingerprints of the guilty was standard practice until elaborate technologies were developed. We've come a long way since then in terms of analyzing DNA and other Narco-Analysis.

Keywords: *forensic science, narco, evidence.*

INTRODUCTION

'Forensic science,' after all these years, is the backbone and cosmetic utility of the investigative agencies, completing the formality of the legal procedure and satisfying the lay public. To please the curious and demanding media and citizenry, it is only highlighted and remembered when significant or newsworthy crimes occur. In India, forensic science is stagnant and stunted in comparison to other fields of science and technology. It is not being used in its entirety to assist law enforcement authorities and the criminal justice system in their investigations. The advantages of refining, regulating, and reorganizing forensic science in comparison to other technologies are evident since it effectively aids law enforcement authorities in criminal investigations and provides proactive support plus it also led to improvement in Internal security, aid in criminal justice administration, and reducing the chance of false conviction/exoneration.¹

Finally, discussions regarding the scientific method and the admissibility of such evidence in criminal prosecutions eclipsed the debate over possible violations of fundamental human rights. As a result, there has been a paucity of critical discussion about how scientific advances are eroding civil freedoms. The disputes on the development of forensic DNA and Narco analysis are revisited in this work. It draws similarities with current events and examines the possibilities for existing and future human rights violations, emphasising that the libertarian model provides a vital counterpoint to the other arguments by emphasising the need for basic rights preservation.

DNA TEST

Meaning:

DNA (Deoxyribose Nucleic Acid is abbreviated as DNA. It's an organic material contained in every living cell that offers each person a unique genetic blueprint. It may be extracted from a wide range of materials, including. Blood, saliva, sperm, hair, urine, bodily fluids, bones, and organs are just a few examples) profiling is one of the forensic methods that require the ability

¹ Dr. T.R. Baggi, 'Why Is Forensic Science Stunted and Static in India?' (*The Hindu*, 10 September 2011) <https://www.thehindu.com/opinion/open-page/why-is-forensic-science-stunted-and-static-in-india/article2442491.ece> accessed 17 January 2022

to match samples with a high degree of precision in terms of attributes that can assist distinguish one source from another.² Scientifically acceptable processes must allow for the reliable measurement and comparison of physical traits if such evidence is to be used in court. Similarly, there must be a scientific foundation for establishing that carefully conducted comparisons can identify possible sources. Except for identical twins, DNA testing is very effective since everyone's DNA is unique. The most important feature of DNA is that it is so unique to each and every individual that it cannot be messed with. DNA testing can be used to determine a child's parentage, discover crimes, and identify disfigured bodies. They are extremely beneficial in the administration of criminal justice as well as in various civil matters such as succession and inheritance.

Types of DNA testing procedures:

Such testing systems may be divided into two categories. Restriction Fragment Length Polymorphism (RFLP) and Polymerase Chain Reaction (PCR) testing are the two types of tests. In general, the RFLP testing technique necessitates a higher volume of DNA, which must be free of contamination in order to get accurate findings. RFLP testing is not suitable for tiny amounts of DNA samples, whereas PCR testing requires a lesser amount of DNA samples. However, because this is such a sensitive test, even the tiniest pollutants at the crime scene might change or impact the results. Because it takes a significantly higher amount of DNA, RFLP is not as widely utilised as it previously was due to the emergence of modern and more efficient DNA analysis techniques. Furthermore, RFLP does not operate well with samples that have been compromised by environmental factors such as dirt or mold.³ The RFLP test has now been superseded with PCR-based testing. It is essentially an amplification technique since a small amount of material may be amplified to the desired quantity. It entails repeated replications of the target region.

Present Indian Scenario:

² 'What Is DNA?' (*Medline Plus*, 19 January 2021)

<https://medlineplus.gov/genetics/understanding/basics/dna/> accessed 17 January 2022

³ Dr. Himanshu Pandey & Ms. Anhita Tiwari, 'Evidential Value of DNA: A Judicial Approach' (*Manupatra*) <http://docs.manupatra.in/newslines/articles/Upload/BF936E7D-4211-4AE4-9BD7-3D721A8E424C.pdf> accessed 17 January 2022

The admissibility of DNA evidence in court is always reliant on its completeness and accuracy collection, preservation, and recording, which might persuade the court that the evidence presented is trustworthy. In India, there is no explicit legislation that may offer precise directions to investigative agencies and courts, as well as the method to be followed in instances requiring DNA as evidence. Furthermore, the Indian Evidence Act⁴ of 1872 and the Code of Criminal Procedure⁵ of 1973 include no special provisions for dealing with science and technology concerns. Due to the lack of such a provision, an investigation officer has a difficult time gathering evidence that requires contemporary mechanisms to show the accused person's guilty.⁶

A police officer may obtain the help of a medical practitioner in good faith for the purpose of an inquiry under Section 53⁷ of the Code of Criminal Procedure 1973. However, it does not allow a complainant to collect blood, sperm, or other evidence in order to file criminal charges against the accused. The CrPC (Amendment) Act, 2005⁸, added two new provisions to the CrPC, allowing the investigating officer to take DNA samples from the bodies of the accused and victim with the assistance of a medical practitioner. These provisions allow a medical practitioner to examine a person suspected of rape, as well as a medical check of the rape victim.⁹

USES OF DNA TESTING

In a criminal setting, similar tests could be necessary after sexual assaults, for example, to identify the father of a child born as a consequence of the alleged attack. In circumstances involving hidden births, neglected children, child swapping, or infanticide, this test can also be utilized to determine that the two persons are genetically related. A DNA test is highly

⁴ Indian Evidence Act, 1872

⁵ Code of Criminal Procedure, 1973

⁶ 'Admissibility of DNA Technology in the Indian Legal System' (*Legally India*, 15 March 2011)

<https://www.legallyindia.com/views/entry/admissibility-of-dna-technology-in-the-indian-legal-system.html> accessed 17 January 2022

⁷ Code of Criminal Procedure, 1973, s 53

⁸ Code of Criminal Procedure (Amendment) Act, 2005

⁹ Arindam Datta, 'Forensic Evidence: The Legal Scenario' (*Legal Service India*)

<https://www.legalserviceindia.com/article/I153-Forensic-Evidence.html> accessed 17 January 2022

valuable in a civil action involving claims for monetary support and maintenance of a child by an estranged partner.¹⁰

CASE LAWS

Pantangi Balarama Venkata Ganesh v State of Andhra Pradesh¹¹ - In this case, the admission of DNA as a piece of evidence in a rape case was questioned, and it was decided that it is admissible in a court of law in general, but subject to specific concerns that need the judge's discretion.

Kathi Kalu Oghad case¹² - In this case, it was determined that giving body extraction does not constitute self-incrimination because self-incrimination was raised in relation to section 139¹³ of the Indian Evidence Act, and it was determined that incrimination occurs when knowledge is revealed through oral testimony, and physical body extractions do not constitute self-incrimination.

RELATED PROBLEMS

Some legal and basic rights of an individual, such as the "Right to Privacy" and "Right against Self-Incrimination," have been seriously harmed by DNA technology. And it is for this reason that courts are often hesitant to accept DNA-based evidence. The Indian Constitution's Right to Life and Personal Liberty, or Article 21¹⁴, includes the Right to Privacy, and Article 20(3)¹⁵ gives the Right against Self-Incrimination, which prevents an accused person in criminal situations from producing evidence against himself or evidence that might convict him. However, the Supreme Court has ruled on different occasions that the right to life and personal liberty are not absolute rights.¹⁶

In India, there is no proper regulation that gives precise instructions to work agencies and courts, as well as the method to be followed in situations using deoxyribonucleic acid as

¹⁰ Dr. Himanshu Pandey & Ms. Anhita Tiwari (n 3)

¹¹ *Pantangi Balarama Venkata Ganesh v State of Andhra Pradesh* [2003] (1) ALD Cri 789

¹² *The State of Bombay v Kathi Kalu Oghad & Ors* [1961], AIR 1808, SCR (3) 10

¹³ Indian Evidence Act, 1872, s 139

¹⁴ Constitution of India, 1950, art 21

¹⁵ Constitution of India, 1950, art 20(3)

¹⁶ Admissibility of DNA Technology in the Indian Legal System (n 4)

evidence. Furthermore, certain regulations allow for caregiver evaluation of the rape defendant as well as several examinations of the rape victim. — The truth is that today's Indian criminal forensic investigations and the policing system are riddled with inefficiencies, old outdated rules and practices, a lack of professionalism and even integrity, and an inability of a top-down approach to planning and execution, which is critical in the current situation.

NARCO-ANALYSIS

Meaning:

Narco analysis is derived from a Greek word *NARKE*, which means anesthesia or trance, and was used to describe a diagnostic psychotherapeutic technique that uses psychotropic drugs to induce a stupor suspension or great diminution of sensibility, a state in which mental elements with strongly associated effects come to the surface and can be exploited by the therapist (or investigating agency). Lie Detector Testing or Truth System Testing are other names for the Narco analysis exam. Bypassing the serum, the individual is put into an unconscious condition and is free to utter anything that comes to mind. In a variety of circumstances, advanced technology requires two professions, law, and science, to collaborate.¹⁷

Main Aim of Narco Analysis:

The goal of the Narco analysis exam is to eliminate a person's ability to lie through his imagination. However, once the individual enters the subconscious level, this imagination is neutralized. As a result, it is assumed that the individual is incapable of lying and that whatever he says is genuine.¹⁸

The Indian Scenario:

Only a few democratic countries, most notably India, still utilize narco analysis. The people and the media in that country are increasingly critical of this. In most developed and/or democratic nations, narcotics analysis is not openly authorized for investigation reasons. An anesthesiologist, a psychiatrist, a clinical/forensic psychologist, an audio-videographer, and

¹⁷ Yamini Rajora, 'Scientific Evidence in Criminal Trials- Narcoanalysis' (*Academike* 8 April 2015) <<https://www.lawctopus.com/academike/scientific-evidence-narcoanalysis/>> accessed 17 January 2022

¹⁸ H. Pricilla & Arya R., 'Polygraph and Narco Test in Indian Evidence Law' (2018) 120 (1) *IJPAM* 125 <<https://acadpubl.eu/hub/2018-120-5/1/30.pdf>> accessed 17 January 2022

accompanying nursing personnel performs the narco analysis test in India. The forensic psychologist will write a report on the disclosures, which will be supported by an audio-video compact CD. If required, the intensity of the revelations is further validated by administering polygraph and brain mapping tests to the person. In India, narcotics analysis is increasingly being used in investigations, court hearings, and laboratories. It does, however, create significant scientific, legal, and ethical concerns. Before the practice spreads further, these issues must be addressed immediately. Narco analysis has become an increasingly frequent word in India, possibly frighteningly so. It is a type of psychotherapy that involves creating a sleep-like condition in a person with the use of barbiturates or other medicines.¹⁹

CONSTITUTIONALITY OF NARCO ANALYSIS

When it comes to the constitutional status of these tests, fingerprinting and ballistic reports are to be deemed constitutional, but when it comes to the conclusiveness of narco analysis and brain mapping in terms of their constitutional status, it is still in dispute. The most pressing constitutional problem is the implementation of the narco test in respect to the accused, which involves a breach of his constitutional rights under Articles 20(3) and 21²⁰. Article 20(3), often known as the right against self-incrimination Because of Article 20(3) is separated into two parts:

First, it is the right that a person accused of a crime has; and second, it is the right that a person accused of a crime has.

Second, it is a safeguard against being forced to testify against him. In light of limiting Article 20(3), the Malimath Committee report said that the criminal conviction rate is at a dismal 6%, owing mostly to proof beyond a reasonable doubt²¹.

The evidentiary value of Narco Analysis - Scientific tests are covered under explanation (a) of sections 53, 53A, and 54 of the Code of Criminal Procedure. Explanation (a) "examination"

¹⁹ Subhojyoti Acharya, 'Is Narco Analysis a Reliable Science? – Present Legal Scenario in India' (*Legal Service India*) <<https://www.legalserviceindia.com/article/1176-Narco-Analysis.html>> accessed 17 January 2022

²⁰ Constitution of India, 1950, art 20(3), 21

²¹ Bharti Kumari & Dr. Vijay Srivastava, 'Evidentiary Value of Narco Analysis with Special Reference to Guidelines of Selvie Case: An Overview' (*Aegaeum Journal*) <<http://www.aegaeum.com/gallery/agm.j-2433.25-f.pdf>> accessed 17 January 2022

means the examination of blood, blood stains, semen, swabs in cases of sexual offenses, sputum and sweat, hair samples, and fingernail clippings using modern and scientific techniques such as DNA profiling and any other test that the registered medical practitioner deems necessary in a particular case. Though it is legal to perform these medical tests on the accused under sections 53, 53A, 54 of the CrPC²². However, the explanation of these parts does not include some other types of medical examination that need testimonial actions, such as psychiatric examination, polygraph, and BEAP test, among others.

ADVANTAGES

- Looking at the current miserable state of society in terms of criminals, crime rate, and harm innocent people, it appears that now is the time to look at measures to lessen this.²³
- To aid investigative authorities, there is a need to develop a set of scientific techniques that can be used to find evidence even when there is complete darkness. The conventional way of getting information through torture is horrible because it violates people's rights while also being a blight on society.²⁴
- It is feasible by providing rich technologies to investigating agencies, one of which is narcotics analysis.
- Although the evidence obtained through this procedure may be deemed untrustworthy, it can be utilized to get admissible evidence, confirm other evidence, or support other evidence.²⁵
- Traditional techniques for extracting truth from the accused via third degree, which is especially severe and infringes on people's rights, can be replaced by scientific techniques such as narco-analysis tests.²⁶

²² Code of Criminal Procedure, 1973, s 53, 53A, 54

²³ "H. Pricilla & Arya R. (n 11)

²⁴ *Ibid*

²⁵ Arya Jha, 'Narcoanalysis: Importance in Criminal Investigation' (*Indian Law Portal*, 22 August 2020)

<https://indianlawportal.co.in/narcoanalysis-importance-in-criminal-investigation/> accessed 17 January 2022

²⁶ *Ibid*

PROBLEMS

- If the person is drug-addicted, then the process will be not as successful as needed for extracting truth and collecting evidence.
- A confession made while a person is in police custody is not admissible as evidence, according to Section 25 of the Indian Evidence Act, 1872²⁷. It implies that there is a chance that evidence will be inadmissible. The Narco-analysis test will be considered a legitimate confession if it is administered in the presence of a magistrate.
- Article 20(3) of the Indian Constitution plainly states that no individual should be a witness against oneself, the procedure may be declared a violation of the Constitution's fundamental rights.
- The information is gathered by the subject while they are semiconscious, the question of the subject's information's trustworthiness might be questioned.

CASE LAWS

State of Gujarat v Anirudh Singh²⁸- The Supreme Court held in *State of Gujarat v Anirudh Singh* that it is the statutory duty of every witness who's had knowledge of a crime to aid the state in giving evidence, and it appears justified that if a person refuses to provide information that is necessary for investigation purposes, an adverse impression must be made against them, and this would not violate Article 20. (3). In this approach, the court struck a compromise between constitutional protection and narco-analysis.

Dharampal v State²⁹-The Supreme Court ruled in *Dharampal v State* that the criminal justice system cannot work effectively if members of society refuse to cooperate with investigators. As a result, it is everyone's job to aid the state in enforcing criminal justice, and no one may avoid social responsibility by withholding criminal facts under the guise of the right to privacy, which is not an absolute right.

²⁷ Indian Evidence Act, 1872, s 25

²⁸*State of Gujarat v Anirudh Singh & Anr* AIR 1997, SC 2780

²⁹*Dharam Pal & Ors v State of Haryana & Anr* [2018]

CONCLUSION

Medical and forensic evidence is widely acknowledged as playing a critical role in assisting courts of law in reaching reasonable findings. As a result, competent medical practitioners should be encouraged to engage in medicolegal work, while the courtroom environment should be welcoming to medical witnesses. When it comes to the outcome of a case, this is critical because if good specialists fail to appear in court, less objective professionals will fill the hole, influencing justice. Different organizations have recognized the necessity to include more and more specialists in expert testimony. For criminal investigations, narco-analysis and DNA testing have shown to be useful and helpful technology that has a significant impact on both the innocent and the guilty, speeding up the process of justice. This criterion should not be utilized in all situations, but only when the interests of society as a whole are at stake. To replace the brutal third-degree approach, more refined and sophisticated questioning procedures are required. The norms of the criminal process, evidence, and institutional infrastructure, which were created over a century ago, are now determined to be insufficient to fulfill the expectations of the scientific community.³⁰

³⁰Arya Jha (n 18)