



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

UNRAVELLING THE LEGAL AND ETHICAL CONUNDRUMS OF NARCO-ANALYSIS TEST IN INDIA

Debalina Roy

LL. M. Candidate

Department Of Law

Rajiv Gandhi National University of Law, Punjab

Abstract: The fields of psychology, psychophysics, and physical sciences have all contributed significantly to the advancement of various lie-detection techniques, which are commonly employed as interrogation tools by law enforcement. One such technique is the Narco-analysis test, popularly dubbed as the ‘truth serum’ test, which entails administering an injection to the subject that contains a ‘barbiturate’ such as scopolamine, sodium amytal, or sodium pentothal. Narco-analysis originated from psychiatric practices and involves the assistance of psychiatrists or medical professionals. This article elucidates the nature and scope of the Narco-analysis test and scrutinises its benefits, drawbacks, applications, and misapplications. The Narco-analysis test, a gift of contemporary medical research, is seen as a substitute for the unfortunate and alleged common employment of third-degree tactics to extract potentially incriminating evidence from the suspects.

The use of the Narco-analysis test presents various conundrums within the realms of law, science, and ethics. The article delineates the circumstances in which a Narco-analysis test may and may not be permissible. The Narco-analysis test has prompted numerous legal concerns regarding its admissibility as evidence, its potential violation of Article 20(3), and its infringement on personal liberty and privacy under Article 21 of the Constitution of India. The article appraises the judiciary’s stance on the evidentiary value of Narco-analysis tests and examines its sanctity under Indian Constitutional Law. With a view to upholding the public interest and the cause of justice while safeguarding the rights of the accused, the author has proposed paradigm guidelines with recommendations for the conduction and regulation of the Narco-analysis test. The author has adopted doctrinal research methodology and referred to primary as well as secondary sources in writing this article and in arriving at the aforementioned findings.

Keywords: narco-analysis test, constitutional law, constitutionality, lie-detection, ethics, justice

I. INTRODUCTION

Across ages and cultures, giving wine to an unwilling witness has been believed to be a useful method to get them to talk and unveil information. This idea dates back centuries and is reflected in the saying “in vino veritas,” meaning “the truth is in the wine”.¹ Narcoanalysis, also known as the “truth serum test,” is a method where a drug is administered to a subject, causing them to feel compelled to answer questions truthfully. The term Narco-Analysis originates from the Greek term “narko”, which refers to anaesthesia or torpor. It is a technique employed for diagnostic and psychotherapeutic purposes, involving the use of psychotropic drugs, particularly barbiturates. This approach is also referred to as the Truth Serum, Drug Hypnosis, or Narco-interview technique.

Narco-analysis test entails inducing hypnosis through the intravenous administration of a drug such as Sodium Pentothal, Scopolamine, or Sodium Amytal, within the controlled environment of a laboratory. This process induces various levels of anaesthesia in the subject, aiming to release repressed emotions through abreaction or catharsis. It is believed that when an individual is in a semi-conscious state, they are unable to fabricate or find it extremely challenging to deceive when questioned. In the hypnotic phase, the subject becomes less constrained and is more inclined to disclose information that would typically remain concealed in a conscious state.

Deception Detection Tests (DDTs) or Lie-detector tests employ modern scientific techniques to detect lying and deception by individuals under investigation in criminal cases. Narco-analysis is one such Deception Detection Test, which is useful in obtaining hidden information related to the crime, often essential for the investigative process. DDTs like polygraph, narco-analysis, and brain-mapping have significant implications in clinical, scientific, ethical, and legal contexts. These tests are considered non-invasive, causing minimal physical or mental harm to the subjects while detecting deception. DDTs can be instrumental in establishing both the guilt and innocence of the accused and have been extensively employed by investigative agencies. In contrast to other methods of detecting deception that rely on monitoring physiological responses during questioning by a clinical psychologist, Narco-analysis utilises Sodium Pentothal, Scopolamine, or Sodium Amytal, to inhibit the neurotransmitter GABA (gamma-aminobutyric acid) and thereby lessen the inhibitory nature of the person being assessed.²

At the convergence of law, ethics, and medicine, lies Narco-analysis posing numerous pertinent questions. In India, narco-analysis tests have been employed as an investigative method in high-profile cases since the 1950s. However, their accuracy and reliability as a scientific tool, as well as their ethical implications, have been a subject of controversy and disagreement. It must be noted that the term “truth serum” is a misnomer, as the drugs used are not actually serums, and the test does not always result in the truth. The scientific validity of these tests has been fiercely debated over the years, leading to their results being considered inadmissible as evidence in court. Additionally, the administration of Narco-analysis tests has been criticised as a cruel and degrading practice. Coercing individuals accused of crimes to undergo such tests has been seen as a violation of Article 20(3) of the Constitution of India, infringing upon their right to privacy and the preservation of their physical and mental well-being, which are protected under Article 21 of the Constitution of India. Consequently, the legal and constitutional validity of narco-analysis tests has become a human rights issue, with concerns about potential infringements on individuals’ rights, freedom, and liberty.

II. EVOLUTION OF NARCOANALYSIS AS A METHOD OF INVESTIGATION

Although Narco-analysis is a fairly new technique used in criminal investigations in India, it has been utilised in the field of psychiatry for quite some time. The term Narco-Analysis was coined by J.S. Horseley³ and was first used in a criminal investigation in the United States in 1922 by Dr. Robert E. House, a Texas

¹ Pak Hung Au et al., *In vino veritas? Communication under the influence—An experimental study*, 197 J ECON BEHAV ORGAN 325, 325 – 340 (2022), <https://doi.org/10.1016/j.jebo.2022.02.024>.

² B.M. Mohan, *Misconceptions about Narco Analysis*, 4(1) INDIAN J MED ETHICS, 7 – 8 (2007), <https://pubmed.ncbi.nlm.nih.gov/18630211/>.

³ J. S. Horsley, *Narco Analysis*, 2(4259) BR MED J., 230 (1942), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2164028/>.

obstetrician, who employed the drug ‘Scopolamine’ on two prisoners. Dr. Robert House, referred to as the “father of the truth serum”, was among the first to publish a paper on the use of certain techniques to extract honest information from criminals, which was featured in the Texas State Journal of Medicine in 1922.⁴ Dr. Robert E. House’s procedure for conducting the test was to administer an initial dosage of 31 grains of morphine sulphate combined with 100 grains of scopolamine hydrobromide.⁵ He recommended that be pursued by smaller doses of scopolamine at 30-minute intervals, along with periods of application of faint chloroform. Upon awakening from the said chloroform treatment, individuals responded openly and honestly to the questions posed to them.

Dr. House documented several cases where this approach led to the release of prisoners, noting that the subjects had no recollection of the information they divulged in the course of the tests. After conducting plentiful experiments, Dr. Robert E. House concluded that his tests were highly reliable when executed correctly. In September 1924, he made an announcement before a gathering of law enforcement officials in Houston, Texas. He stated that he had successfully developed a method to extract memories from an individual’s subconscious mind irrespective of their will. This was achieved by administering a specific amount of scopolamine, commonly known as truth serum, into the bloodstream, which induced a state of “twilight sleep”. While in this state of artificial unconsciousness, the person would answer questions with a simplicity and honesty reminiscent of a child. This was even true of patients who were previously indifferent, unapproachable, or even displayed negative transference. Their responses would be devoid of evasion, deceit, or fraud, reflecting the stored memories within their mind.

During Dr. Robert House’s lifetime, it was common practice to resort to violent methods to extract information from witnesses or suspects. This deeply disturbed him, leading him to view his truth serum as a means of safeguarding human rights. In a conversation with police officers in Houston, he expressed his perspective in the following words: “I offer my theory only as a humane third degree. If a suspect tells without coercion the truth, and his statement is verified, there would be no use for any type of third degree, but when a suspect will not tell the truth and what he tells cannot be verified, then it should be permissible and a State should permit any humane measure to prove his guilt or innocence. I may be wrong, but I believe the rights of society are paramount to the right of the criminal.”⁶

Similar experiments had been conducted by Dr. Lindemann who discovered that administering an intravenous injection of sodium amytal, ranging from 3 to 4 grains, can prompt a psychological release in patients. This release serves to encourage them to speak frankly and honestly, divulging information about their actions and personal encounters. Dr. W.F. Lorenz, the director of the Wisconsin Psychiatric Institute, also played a pivotal role as an early pioneer in this area. In 1932, he published a paper titled “Criminal Confessions under Narcosis” in the Archives of Neurology and Psychiatry.⁷ Since then, there has been an abundance of literature on the subject, with earlier authors being more enthusiastic and optimistic about its use in criminal cases as compared to present-day authors. As a result, the use of “truth serums” as a primary interrogation method in the investigation stage to aid prosecution has gradually diminished over time.⁸

Following the war years, the intelligence agencies of the United States continued their experimentation with narco-analysis, among which is the Central Intelligence Agency (CIA).⁹ In India, the Narco-analysis test was employed for the first instance in the 2002 Godhra train burning incident¹⁰ wherein suspects named Kasim

⁴ Robert E. House, *The Use of Scopolamine in Criminology*, 2 (4 AM J POLICE SCI, 328, 328-338, (1931) <https://www.jstor.org/stable/1147361?origin=crossref>.

⁵ *Id.*

⁶ Andre A. Moenssens, *Narcoanalysis in Law Enforcement*, 52(4) J CRIM LAW CRIMINOL POLICE SCI, 453 – 458 (1961), <https://www.jstor.org/stable/1141276?origin=crossref>.

⁷ Alison Winter, *The Making of ‘Truth Serum*, 79 (3) BULL HIST MED, 500–533 (2005), <http://www.jstor.org/stable/44448255>.

⁸ *Supra* note 6.

⁹ George Bimmerle, “Truth” Drugs in Interrogation, DPLA, (1981), <https://dp.la/item/ec247536ce6377eb3fe0890783c6c052>.

¹⁰ THE HINDU, *Godhra case | Supreme Court to hear pleas of Gujarat government, convicts on March 24*, <https://www.thehindu.com/news/national/godhra-train-burning-case-sc-to-hear-pleas-of-gujarat-govt-convicts-on-march-24/article66631860.ece> (last visited Sep. 1, 2025).

Abdul Sattar, Bilal Haji, Abdul Razzaq, Anwar Mohammad, and Irfan Siraj underwent a Narco-analysis test¹¹ as part of the investigation into this case. Mohinder Singh Pandher and Surendra Kohli, the primary suspects in the horrific Nithari serial killings, was administered the Narco-analysis test. Ajmal Kasab, the apprehended terrorist from the 26/11 Mumbai attacks, also underwent a Narco-analysis test, revealing details about how individuals were indoctrinated by Pakistani terror groups to commit mass killings. In the well-known Arushi Talwar murder case, Narco-analysis tests were conducted on parents, Dr. Rajesh Talwar and Nupur Talwar. Further, Krishna, Dr. Rajesh Talwar's assistant, also underwent the test, the video of which was leaked to the media. Very recently, the tragic murder of Shraddha Walker allegedly at the hands of her boyfriend and live-in partner, Aftab Amin Poonawala, has again underscored the debate over the use of the Narco-analysis test.¹²

III. MODUS OPERANDI OF NARCO-ANALYSIS TEST

For conducting a Narco-analysis test, the subject is intravenously injected with a hypnotic-like Sodium Pentothal or Sodium Amytal in a controlled laboratory environment. The test involves mixing 3 grams of Sodium Pentothal or Sodium Amytal with 3000ml of distilled water. The dosage is determined based on the subject's body weight, and an Anaesthesiologist administers the drug at a rate of 4ml/min (100 mg/min) using a 2.5% solution of Sodium Pentothal. Subsequently, the subject's inhibitions are reduced by manipulating their nervous system at a molecular level.¹³ In this sleep-like state, efforts are made to gather reliable information about the crime. The dosage varies depending on factors such as the person's gender, age, overall health, and physical condition.

Administering an incorrect dose can lead to the subject falling into a coma or even experiencing fatal consequences. The rate of administration is controlled to drive the accused slowly into a hypnotic trance. The rate at which the substance is administered is carefully controlled in order to gradually induce a hypnotic state in the accused. The impact of these biomolecules on an individual's bioactivity becomes apparent as the drug suppresses the Central Nervous System (CNS), reduces blood pressure, and slows down heart rate, ultimately placing the subject into a hypnotic trance and causing a lack of inhibition. It is during this stage that the subject is interrogated by investigative agencies in the presence of medical professionals.

In India, Narco-analysis test is conducted by a team consisting of an anaesthesiologist, a psychiatrist, a clinical/forensic psychologist, an audio-videographer, and supporting nursing staff. The forensic psychologist is responsible for creating a report detailing the revelations made during the test, which is accompanied by a compact disc containing audio and video recordings of these revelations. The expert's report plays a crucial role in the process of evidence collection. This procedure is carried out in government hospitals only after receiving a court order instructing the doctors or hospital authorities to conduct the test. Additionally, the personal consent of the subject is also essential. The validity of the information acquired during the Narco-analysis examination is confirmed by conducting additional polygraph and brain mapping tests on the individual, if deemed necessary.

¹¹ INDIA HERALD, *When was the first time the Narco test conducted?*, <https://www.indiaherald.com/History/Read/994556048/When-was-the-first-time-the-Narco-test-conducted#:~:text=The%20first%20narco%20test%20in,Anwar%20Mohammad%20and%20Irfan%20Siraj> (last visited Sep. 1, 2025).

¹² Sofi Ahsan, *Explained | Shraddha Walker Case: Narco-Analysis Test and Legal Position*, LiveLaw, (2022) <https://www.livelaw.in/know-the-law/shraddha-walker-case-narco-test-and-legal-position-215510?infinite-scroll=1> (last visited Sep. 1, 2025).

¹³ Taniya Jaiswal, *Narco Analysis: Unearthing the Truth*, SIFS India (2020) <https://www.sifs.in/blog-details/narco-analysis:-unearthing-the-truth/54> (last visited Sep. 1, 2025).

IV. VIEWS DENOUNCING NARCO-ANALYSIS: SCIENTIFIC, ETHICAL & HUMAN RIGHTS PERSPECTIVE

The doctors and scientists who developed and upheld the Narco-analysis test were no lawyers. They envisioned Narcoanalysis as a humane alternative to third-degree methods. However, they could not anticipate the legal and ethical battles surrounding the acceptance of the Narco-analysis test in Court. Furthermore, there have been concerns raised about the accuracy of the information obtained during the process of Narco-analysis. Opponents of the test argue that because these drugs cause the individual to experience false perceptions, they are more likely to disclose information based on hallucinations, which may not necessarily be truthful.¹⁴

The accuracy and reliability of narco-analysis have faced severe criticism due to its inability to provide 100% accurate results.¹⁵ The test is not effective when dealing with individuals who feign illness or are evasive and deliberately untruthful. Determining the appropriate dosage of drugs for each person is a challenging task as the dosage required varies depending on factors such as willpower, mental attitude, and physical condition. Administering an incorrect dose can result in the subject falling into a coma or, in severe cases, even death.

In 1989, the *State v. Pitts*¹⁶ case resulted in the New Jersey Supreme Court banning the use of sodium amytal in Narco-analysis due to concerns over the lack of scientific reliability in the interview outcomes. Despite some potential benefits from these interviews, the court concluded that individuals have a tendency to fill in gaps in narratives with fabricated information (hyper-amnesia), or develop false memories (memory hardening), leading to the inclusion of non-existent events in their recollection (hypnotic recall).¹⁷ The Narco-analysis test is a procedure that aims to restore the memory of the subject who has forgotten certain details. Psychiatrists recommend that recollections of past events made while under the influence of drugs should not be regarded as reliable.¹⁸

Various researchers have conducted clinical and experimental studies that have reached the consensus that the widely believed concept of a “truth serum” is nothing more than a myth. While barbiturates can disrupt defensive patterns and may sometimes aid in interrogation, even in optimal conditions, the information obtained is often tainted by deception, imagination, and incoherent speech. Testimony regarding specific dates and locations is unreliable and frequently contradictory due to the patient’s impaired sense of time, which may sometimes unintentionally lead to the concealment of the truth. “Criminal suspects, while under the influence of barbiturate drugs, may deliberately withhold information, persist in giving untruthful answers, or falsely confess to crimes they have not committed. Narcoanalysis is of doubtful value when used for the purpose of obtaining confessions to crimes.”¹⁹

Dr. Inbau, former law professor at North-Western University, who had significant experience in observing and participating in tests involving the “truth serum,” believes that these tests can sometimes be effective on individuals who, if interrogated properly, would have revealed the truth regardless.²⁰ However, someone who is determined to lie can often continue deceiving even when under the influence of the drug. In a 2010 publication²¹ in the Indian Journal for Medical Research, Suresh Bada Math, an expert in psychiatry, throws

¹⁴ Suresh Bada Math, *Supreme Court judgment on polygraph, narco-analysis & brain-mapping: A boon or a bane*, 134(1) INDIAN J MED RES., 4 – 7 (2011), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3171915/>.

¹⁵ Amar Jesani, *Medical professionals and interrogation: Lies about finding the truth*, 3(4) INDIAN J MED ETHICS, (2005) 10.20529/IJME.2006.046.

¹⁶ *State v. Pitts*, 116 N.J. 580 (1989).

¹⁷ Sriram Lakshman, *Narcoanalysis and some hard facts*, THE HINDU, (May. 18, 2007) <https://frontline.thehindu.com/the-nation/article30191389.ece>. (last visited Sep. 1, 2025).

¹⁸ Dr Justice AR Lakshmanan, *Report on Use of Narco Analysis in Police Interrogation: Constitutionality*, 3 MLJ CRL, 39 (2010), [report on use of narco analysis in police interrogation : constitutionality 2010 3 mlj crl 39](https://www.mca.gov.in/LinkClick.aspx?linkid=39).

¹⁹ J.M. McDonald, *Narcoanalysis and Criminal Law*, 111 (4) AM J PSYCHIATRY, 283 – 288 (2006), <https://ajp.psychiatryonline.org/doi/abs/10.1176/ajp.111.4.283>.

²⁰ A.K. Kala, *Of ethically compromising positions and blatant lies about ‘truth serum’*, 49(1) INDIAN J PSYCHIATRY, 6 – 9 (2007), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2900002/>.

²¹ *Supra* note 14.

light on the criticisms faced by lie detection techniques and states that studies on the reliability of the narco-analysis test have yielded inconclusive results.

The potential dangers associated with the use of drugs in Narco-analysis, such as Sodium Pentothal and Sodium Amytal, include serious side effects like circulatory depression, respiratory depression leading to apnea, and anaphylaxis. These drugs can also affect the central nervous system, causing headaches, retrograde amnesia, emergence delirium, prolonged drowsiness, and extended recovery time²², among other adverse reactions. Due to ethical concerns, psychiatrists worldwide are advised against conducting Narco-analysis when it is requested for criminal investigation purposes. The Medical Council of India has amended its official Code of Medical Ethics by including a clause stating, “The Physician shall not aid or abet torture nor shall he be a party to either infliction of mental or physical trauma or concealment of torture inflicted by some other person or agency in clear violation of human rights.”²³

Although extensive research is being conducted, there is a dearth of unbiased scientific proof to demonstrate that Narco-analysis exclusively uncovers the truth and only the truth. The United Nations’ definition of torture encompasses four key elements: it causes physical and mental anguish, it is degrading, it is intentionally inflicted, and it is intended to elicit information or confessions. Furthermore, it must be carried out by an authorised official. Dr. Amar Jesani asserts that the Narco-analysis test fulfills all four requirements.²⁴

V. IN DEFENCE OF NARCO-ANALYSIS

The process of Narco-analysis is built upon the fundamental understanding that the ability to deceive relies on one’s imagination, and it is this capability that is counteracted by the drugs. Narco-analysis does not produce new data in the person, instead, it aids the individual in breaking through psychological obstacles.²⁵ The interrogators employ a specific questioning technique, repeating the questions periodically to assess if the answers obtained are consistent. This repetitive enquiring helps to diminish any uncertainties.²⁶ Additionally, during such a procedure, it becomes challenging for a person to fabricate lies, and their responses are limited to what they already know to be true.

Drugs used in narco-analysis such as sodium amytal and sodium pentothal are also utilised by psychoanalysts to aid patients in recollecting traumatic memories that they would otherwise be unable to remember. According to anaesthesiologists, these drugs are devoid of any adverse effects as they dissipate within the body within a span of five minutes.²⁷ The administration of the drug is meticulously controlled, taking into account the accused’s age, gender, overall health, and physical state. The Narco-analysis test is conducted by a team comprising an anaesthesiologist responsible for administering and regulating the dosage of the drug, a doctor who verifies if the individual is suitable for the test, and a forensic psychologist who handles the questioning and interaction with the subject. Additionally, the drug employed in narco analysis is used in a diluted form, ensuring no harmful impact on the body, as observed in *Santokben Jadeja v. State of Gujarat*.²⁸

²² Francisco López-Muñoz et. al, *The history of barbiturates a century after their clinical introduction*, 1(4) NEUROPSYCHIATR DIS TREAT, 329-43 (2005), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2424120/>.

²³ NATIONAL MEDICAL COMMISSION, *Code of Medical Ethics Regulations*, 2002, <https://www.nmc.org.in/rules-regulations/code-of-medical-ethics-regulations-2002/> (last visited Sep. 1, 2025).

²⁴ Amar Jesani, *Willing participants and tolerant profession: Medical ethics and human rights in narco-analysis*, 5(3) INDIAN J MED ETHICS, 130 – 135 (2008), [10.20529/IJME.2008.048](https://www.ijme.org.in/10.20529/IJME.2008.048).

²⁵ Ananthi S. Bharadwaj & Sumithra Suresh, *Narco Analysis And Protecting The Rights Of The Accused*, 4(12) NSLR, 121 (2008), <https://nslr.in/wp-content/uploads/2019/03/NSLR-Vol-4-No-12.pdf>.

²⁶ *Supra* note 17.

²⁷ James V. O’Connor, *Truth Serum as Behavior Modification*, THE NEW YORK TIMES (Jul. 22, 2001), <https://www.nytimes.com/2001/07/22/nyregion/health-care-truth-serum-as-behavior-modification.html> (last visited Sep. 1, 2025).

²⁸ *Santokben Jadeja v. State of Gujarat*, 2007 Cri LJ 4566.

As per reports of investigative agencies, narco-analysis tests hold an impressive success rate of about 96-97%, states the Former Director of Forensic Science Laboratories, Bangalore, Karnataka, Dr. B.M. Mohan.²⁹ These figures, endorsing the use of narco-analysis, are pivotal in assessing its viability. The precision of responses acquired through narco-analysis constitutes a subject of scientific scrutiny. Although certain scholars in the scientific domain affirm the escalating dependability and veracity of outcomes yielded by this approach, this particular facet lies beyond the purview of this academic composition. The primary emphasis is on scrutinizing and affirming the legality of employing narco-analysis as an investigative technique within the criminal justice system.

Narco-analysis has been deemed by the judiciary as a standard practice in investigative procedures.³⁰ "Investigation" encompasses all the actions undertaken by police officers or authorised individuals (excluding Magistrates) for the purpose of gathering evidence as per Section 2 (h) ³¹ of the Code of Criminal Procedure. Consequently, it has been established that the right to conduct Narco analysis falls under the ambit of an investigation as derived from these provisions. According to this view, the consent of the accused is rather immaterial in this regard.

In *Rojo George v. Deputy Superintendent of Police*³², the Kerala High Court sanctioned the use of narcoanalysis tests in investigation and acknowledged that criminals today employ sophisticated technology and modern methods to carry out their crimes. Against which, traditional investigative methods and direct questioning of suspects may not yield satisfactory results. It is therefore necessary to employ new scientific techniques like polygraph tests, brain mapping, and narco-analysis. The court further opined that as long as these techniques are conducted under the supervision of experts in the field, there is no violation of the fundamental human rights of citizens by the investigating agencies.

VI. FORENSIC SCIENTIFIC EVIDENCE IN NEXUS WITH NARCO-ANALYSIS

Forensic scientists play a crucial role in assisting with crime investigation and prosecution process by utilizing scientific examination and analysis of physical evidence. The term "forensic" originates from the Latin word "forensis," meaning "of the forum." It refers to the application of scientific principles to criminal and civil laws enforced by law enforcement agencies within the criminal justice system. Forensic Science involves the integration of various scientific disciplines and methodologies into legal matters. Essentially, forensic science refers to the combination of law and science, specifically applied within the context of courts of law. It applies the methods and techniques of basic sciences to address legal issues. Forensic science has revolutionised criminal trials and become an invaluable asset to crime investigation agencies and the criminal justice system in accurately identifying the guilty and protecting the innocent. The Hon'ble Supreme Court in *Dharam Deo Yadav v. State of U.P.*³³ provided insight into the significance of forensic scientific evidence, particularly in cases involving heinous and well-organised crimes.

The value of scientific evidence in criminal investigations and trials is widely acknowledged, but there is ongoing debate about the role of legal professionals in assessing such evidence, both in India and globally. There are doubts about whether the criminal investigation team in India is adequately trained to apprehend suspects without resorting to coercive methods. Furthermore, it is concerning that there have been instances of erroneous convictions due to flawed forensic evidence.³⁴

²⁹ *Supra* note 2.

³⁰ Abhyudaya Agarwal & Prithwijit Gangopadhyay, *Use of Modern Scientific Tests in Investigation and Evidence: Mere Desperation or Justifiable in Public Interest?*, 2(1) NUJS LAW REV, (2009), <http://nujslawreview.org/2016/12/03/use-of-modern-scientific-tests-in-investigation-and-evidence-mere-desperation-or-justifiable-in-public-interest/>.

³¹ The Code of Criminal Procedure, 1973, §2, No. 2, Acts of Parliament, 1974 (India).

³² *Rojo George v. Deputy Superintendent of Police*, 2006 (2) KLT 197.

³³ *Dharam Deo Yadav v. State of U.P.*, AIR (2014) 5 SCC 509.

³⁴ William C. Thompson, *Beyond bad apples: analyzing the role of forensic science in wrongful convictions*, 37 SW. U. L. REV., 971 - 994, (2009) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2214465.

Forensic science is an advanced scientific method utilised in both criminal and civil investigations. It plays a crucial role in the criminal justice system by providing answers to significant inquiries. Through the analysis of physical evidence, conducting tests, interpreting data, providing clear and concise reports, and delivering truthful testimony, forensic science can establish the occurrence of a crime, identify the person responsible, or establish a connection to the crime.

The Indian Evidence Act, 1872, incorporates the term “Science” in Section 45 in the following words: “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 experts³⁵”. If there is a need for scientific, technical, or other specialised knowledge to help understand the evidence or make a decision about a disputed fact, an individual who has the necessary expertise, skills, experience, training, or education can provide testimony in the form of an opinion or in any other appropriate manner.

The US Supreme Court, in the case of *Daubert v. Merrell Dow Pharmaceuticals*³⁶, established four factors that were considered to be indicative of the features of scientific knowledge. These factors include (i) the ability to be tested or falsified, (ii) undergoing peer review, (iii) having a known or potential error rate, and (iv) being generally accepted within the scientific community. The principle of “general acceptance in the particular field” was initially established in the case of *Frye v. United States*³⁷, which guided the admissibility of scientific evidence for many years.

In *Barinder Kumar Ghose v. Emperor*³⁸, relevant evidence has been found to maintain its relevance, even if it was not obtained through proper legal procedures. In *Pushpadevi M. Jatin v. M. L. Wadhwan*³⁹, the Apex Court has clarified that if the evidence falls within the scope of its definition, the court can consider it without placing much importance on how it was obtained.

VII. WHY SCIENTIFIC EVIDENCE IS THE NEED OF THE HOUR

The primary objective of conducting forensic investigations in criminal cases is to promptly gather evidence that establishes a connection between the suspect, victim, and the crime scene through scientific analysis. In modern times, the use of forensic science is crucial in criminal investigations. However, in India, even in heinous crimes, a large number of criminals remain unprosecuted, and only a small percentage of trials result in acquittal. This is due to the inefficiencies relating to the investigation, prosecution, and conviction of criminals. As a consequence, the number of criminals and crimes continues to rise. Although crimes have become more advanced technologically and scientifically, investigative agencies still rely on outdated procedures, which yield insufficient results. Unlike oral evidence, forensic evidence is not subject to issues such as observation bias, external influence, or humiliation. There is an urgent and widespread need for the integration of forensic science in criminal investigations.⁴⁰ The dire need for utilizing scientific methods in the investigation of criminal cases has emerged due to multifaceted factors such as evolving social conditions, increasing opportunities for concealing evidence, advancements in technical knowledge, expanding the scope of criminal activities, and the improved quality of evidence available.

The aim of an investigation is to uncover the truth and gather evidence that can be objectively evaluated by the judicial system in order to establish the truth.⁴¹ Justice is achieved when the guilty party is lawfully

³⁵ The Indian Evidence Act, 1872, §45, No. 1, Acts of British Parliament, 1872 (India).

³⁶ *Daubert v. Merrell Dow Pharmaceuticals, Inc.* 509 US 579 (1993).

³⁷ *Frye v. United States*, (1923) 54 App DC 46.

³⁸ *Barinder Kumar Ghose v. Emperor*, ILR (1910) 37 Cal 467.

³⁹ *Pushpadevi M. Jatin v. M. L. Wadhwan*, (1987) 3 SCC 367.

⁴⁰ Arun Kumar Singh & Ameesha Singh, *The Legal Aspects of Forensic Science in Law with Reference to Crime Scene Investigation*, 9(1) IUP LAW REV., 22 – 37, (2019) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3399948.

⁴¹ R.P. Sharma, *Truth Detecting Techniques vis-à-vis Physical Evidence*, 4 Kar L.J., 36 (2007).

punished, and for this reason, an investigation must be conducted without any inadequacies. In the pursuit of justice, a prompt, fair, and unbiased investigation is crucial. The right to a speedy trial is considered a fundamental right under Article 21 of the Indian Constitution⁴², as highlighted in the case of the State of Maharashtra v. Champalal Punjafishah.⁴³ The Supreme Court has also emphasised in the case of D. K. Basu v. State of West Bengal⁴⁴ that law enforcement agencies must operate within the demarcated boundaries of the law. Further, the apex court opined that scientific approaches to investigation and interrogation are necessary to prevent custodial deaths and the use of torture in custody, which undermines the rule of law. The victim's perspective and interests must be taken into consideration and measures must be taken to ensure an expedient and efficient investigation and trial. It is undeniable that the victim has a vested interest in expeditious justice, as is known to us all justice delayed amounts to justice denied.

According to an article in the Deccan Chronicle from February 2016, KN Bhat, the former additional solicitor general of India, states that if the police resort to using lie-detector tests and similar methods in criminal cases, it indicates that the investigation has come to a standstill. This suggests that other methods of obtaining evidence or extracting information, such as obtaining a confession, have been unsuccessful. The Allahabad High Court observed in Abhay Singh v. State of U.P. that in cases where the ordinary methods of conducting the investigation have proved unfruitful, scientific techniques must be put into use, in pursuit of truth and justice, observing that, "The discovery of truth is the desideratum of investigation, and, all efforts have to be made find out the real culprit, because, one guilty person, who escapes, is the hope of one million Courts have, therefore, to adopt a helpful attitude in all efforts, made by prosecution for discovery of the truth. If the Narco-analysis and Brain Mapping Test can be helpful in finding on the facts relating to the offence, it should be used and utilised and the Courts should not obstruct the conduct of the exercise".⁴⁵

VIII. CONSTITUTIONAL VALIDITY OF NARCO-ANALYSIS TEST

The Narco-analysis test has generated a significant amount of useful information in numerous cases, but it has also sparked numerous controversies due to critics expressing deep scepticism about the use of drugs on subjects to extract the truth. The application of this test as an investigative tool raises legitimate concerns regarding the infringement of individual rights, liberties, and freedom. Several human rights activists, defence lawyers, etc. have raised concerns about the constitutionality of the Narco-analysis test and have asserted that the procedure violates the following fundamental rights:

8.1. RIGHT AGAINST SELF-INCRIMINATION UNDER ARTICLE 20(3)

One of the major legal controversies surrounding the use of narco analysis is the alleged violation of the Right Against Self-incrimination, as guaranteed by Article 20(3) of the Indian Constitution. Article 20(3) embodies the principle of 'Nemo Tenetur se Ipsum Accusare' and provides that "No person accused of any offence shall be compelled to be a witness against himself."⁴⁶ Thus, the right against self-incrimination is a constitutionally guaranteed right of an accused and has been statutorily safeguarded under Section 161 (2) of the Code of Criminal Procedure.⁴⁷ The privilege against self-incrimination is a fundamental principle in common law criminal jurisprudence. The underlying rationale behind this principle is two-fold. Firstly, it aims to guarantee the accuracy and dependability of the statements provided by an accused individual. Secondly, it seeks to ensure that these statements are given willingly and without any form of coercion.

⁴² INDIA CONST. art. 21.

⁴³ State of Maharashtra v. Champalal Punjafishah, (1981) 3 SCC 610.

⁴⁴ D. K. Basu v. State of West Bengal, (1997) 1 SCC 416.

⁴⁵ Abhay Singh v. State of U.P., 2009 Cr LJ 2189.

⁴⁶ INDIA CONST. art. 20, cl. 3.

⁴⁷ The Code of Criminal Procedure, 1973, §161, No. 2, Acts of Parliament, 1974 (India).

The protection provided to an accused by Article 20(3) applies to any individual who is charged with a crime and prohibits any form of coercion to force them to testify against themselves. In the case of *M.P. Sharma v. Satish Chandra*⁴⁸, the Supreme Court elucidated the extent of this provision and stated that:

“The right against self-incrimination includes the following three elements:

- i. It is a right pertaining to a person who is accused of an offence
- ii. It is a protection against compulsion to be a witness
- iii. It is a protection against such compulsions relating to his giving evidence ‘against himself’”

Many argue that subjecting a person accused of a crime to a Narco-analysis test would violate Article 20(3). It has been established⁴⁹ that the term “to be a witness” includes both oral and written testimony.⁵⁰ To attract the protection of Article 20(3), the statements given by the accused in a Narco-analysis test must be regarded as a form of testimony. The Supreme Court has precisely outlined the extent of protection granted by the Right Against Self-incrimination and has established the principle of the ‘right to silence’ in the case of *Nandini Satpathy v. PL Dani*.⁵¹ In contrast to the limited interpretation⁵² of the expression ‘accused of an offence’ in other cases⁵³, the Hon’ble Supreme Court explicitly stated that the safeguard provided by Article 20(3) comes into effect during the pre-trial phase as well:

“Any giving of evidence, any furnishing of information, if likely to have an incriminating impact, answers the description of being witness against oneself. Not being limited to the forensic stage by express words in Article 20(3), we have to construe the expression to apply to every stage where furnishing of information and collection of materials takes place. That is to say, even the investigation at the police level is embraced by Article 20(3).”⁵⁴

Therefore, Article 20(3) has the potential to be applicable even during the stage of interrogation. The apex court has ruled that the safeguard provided by Article 20(3) covers any kind of “compulsory process” used to gather evidence. As a consequence, this significant legal precedent has broadened the interpretation of “compelled testimony” under Article 20(3) to include not just evidence presented in court but also situations where the government employs compulsion. In this framework, compulsion can pertain to both physical and mental coercion. Detractors of the procedure contend that methodologies like Narco-analysis constitute a form of mental compulsion. Mental compulsion, in this context, transpires when “the mind has been so conditioned by some extraneous process as to render the making of the statement involuntary and therefore extorted,” as articulated by the Court in *State of Bombay v. Kathi Kalu Oghad*.⁵⁵

The Apex Court, however, acknowledging the significance of a voluntary statement from the accused in solving a case, has underscored the importance of implementing safeguards. These safeguards aim to eradicate any perception of coercion and guarantee that the accused willingly opts to provide statements during the investigation. The Supreme Court has also ruled in the case of *Kalawati v. State of Himachal Pradesh*⁵⁶ that “Article 20(3) does not apply when the confession is made by the accused without any form of inducement, threat, or promise.” Concurring with the above view, the Bombay High Court upheld the validity of the Narco-analysis test in *Ramchandra Ram Reddy v. The State of Maharashtra*⁵⁷.

⁴⁸ *M.P. Sharma v. Satish Chandra*, AIR 1954 SC 300.

⁴⁹ *State of Bombay v. Kathi Kalu Oghad*, (1962) 3 SCR 10.

⁵⁰ *Dalmia, R.K. v. Delhi Administration*, AIR 1962 SC 1821 (1870).

⁵¹ *Nandini Satpathy v. PL Dani*, (1978) 2 SCC 424.

⁵² *R.N. Bansilal v. M.P. Mistry*, AIR 1961 SC 29.

⁵³ *R.C. Mehta v. State of West Bengal*, AIR 1970 SC 940, *State of Bombay v. Kathi Kalu Oghad*, (1962) 3 SCR

⁵⁴ *Supra* note 51.

⁵⁵ *State of Bombay v. Kathi Kalu Oghad*, (1962) 3 SCR 10.

⁵⁶ *Kalawati v. State of Himachal Pradesh*, AIR 1953 SC 131.

⁵⁷ *Ramchandra Ram Reddy v. State of Maharashtra*, AIR 1962 SC 1788.

In the case of *Selvi v. State of Karnataka*⁵⁸, the Supreme Court ruled that conducting a Narco-Analysis test on an accused person without their consent is a violation of Article 20(3) of the Constitution of India. The Court further mandated that the test must be carried out in the presence of an expert. Additionally, the Apex Court held that the test results alone cannot be considered as evidence since the accused person does not have conscious control over their responses during the test administration.

8.2. RIGHT TO LIFE AND PERSONAL LIBERTY UNDER ARTICLE 21

There are various perspectives through which the involuntary application of the Narco-analysis test might be perceived as a restriction on 'personal liberty.' The use of physical force to restrict an individual who is unwilling to undergo the test is a clear sign of this limitation. Furthermore, it is contended that the use of drugs to elicit revelations or the inferences made based on the subject's responses can be seen as an invasion of the individual's mental privacy.

The law does impose some limitations on personal freedom in the regular exercise of police powers. The Code of Criminal Procedure, for instance, encompasses a comprehensive framework outlining the authority related to arrest, detention, interrogation, search, and seizure. A fundamental tenet of the criminal justice system is that both the police and the judiciary possess the right to employ a reasonable degree of coercive powers. Consequently, the provision granting courts the authority to compel an arrested person to undergo a medical examination also sanctions the use of 'force as is reasonably necessary' to fulfill the intended purpose. It is thus clear that the concept of 'personal liberty' does not grant absolute rights, and the validity of any limitations imposed on it must be assessed based on factors like 'fairness, non-arbitrariness, and reasonableness'.

The significance of personal autonomy in choices such as remaining silent or speaking out must be acknowledged. Making a statement is a personal decision, and no one should interfere with that autonomy, particularly when the individual may face criminal charges or penalties. In the case of *Selvi v. State of Karnataka*⁵⁹, the Supreme Court ruled that subjecting an individual to a Narco-analysis test violates the standard of 'substantive due process' necessary to restrain personal liberty. Furthermore, the Apex Court opined that compulsory administration of the Narco-analysis test would be considered as 'cruel, inhuman or degrading treatment' based on the evolving international human rights standards. Moreover, relying on the outcomes obtained from these methods contradicts the principle of the 'right to a fair trial'.

8.3. RIGHT TO PRIVACY UNDER ARTICLE 21

The Narco-analysis test has been deemed to be violative of the Right to Privacy under Article 21 of the Constitution of India by several human rights advocates. They contend that this procedure of Narco-analysis invades privacy by extracting personal information from the accused, which is known only to them. It is important to determine whether this procedure qualifies as a legal restriction on the right to privacy. Although the Indian Constitution does not explicitly mention privacy, it is understood to be encompassed within the right to life and liberty guaranteed by Article 21 in Part III of the Constitution. In our country, the judiciary has primarily emphasised protecting the body and physical spaces from intrusive actions by the State when it comes to privacy. While criminal procedures and evidence laws allow for interference with physical privacy through provisions for arrest, detention, search, and seizure, these provisions cannot be used to force someone to disclose personal knowledge about a relevant fact.

The Supreme Court in *People's Union for Civil Liberties v. Union of India*⁶⁰ held that the unauthorised interception of telephone conversations by police officers infringes upon the "right to privacy" as outlined in Article 21. However, it was not explicitly stated that phone tapping by law enforcement is completely prohibited, as there may be circumstances where it is necessary to prevent criminal activities and aid in investigations. Therefore, these invasive practices are acceptable if carried out under an appropriate

⁵⁸ *Selvi v. State of Karnataka*, (2010) 7 SCC 263.

⁵⁹ *Id.*

⁶⁰ *People's Union for Civil Liberties v. Union of India*, AIR 1997 SC 568.

legislative framework that regulates their usage. In the landmark case of *Maneka Gandhi v. Union of India*⁶¹, it was established that the right to privacy is an essential aspect of personal liberty. It was further emphasised that personal liberty entails “the right of an individual to be free from restrictions or encroachments on their person, whether directly imposed or indirectly brought about through calculated measures⁶²”.

In *Stefanelli v. Minard*⁶³, the violation of the right to privacy, specifically in cases where there are no guidelines regarding who can conduct a search and under what circumstances, constitutes an unreasonable search and seizure. This is especially true when there are already existing laws that adequately address the situation. In *Rochin v. California*⁶⁴, the Supreme Court of the United States (SCOTUS) acknowledged the standard of “conduct that shocks the conscience” as a determining factor for when the extraction of physical evidence violates the guarantee of due process of law. It was held by the SCOTUS that unlawfully invading the petitioner’s privacy, the effort to force him to speak and extract what was inside his mouth, and the coercive removal of the contents of his stomach by the government agents to obtain evidence are likely to disturb even the most desensitised individuals. These methods are too reminiscent of torture tactics to allow for any constitutional distinction.

In *Selvi v. State of Karnataka*⁶⁵, the Apex Court held that compelling an individual to undergo a Narco-analysis test is an unwarranted invasion of an individual’s mental privacy. The Supreme Court further ruled that if a person is forcibly subjected to Narco-analysis test within the premises of a forensic laboratory or hospital, they would be considered to be in a custodial environment. This holds true regardless of whether the person has been formally accused, is a suspect, or a witness. This interpretation is in line with the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights (ICCPR), and the Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment of 1984.

Thus, no person, whether an accused, suspect, or witness, can be compulsorily subjected to a Narco-analysis test. Such an action would be an unjustifiable invasion of personal liberty and privacy, and would also violate the accused person’s right against self-incrimination. However, bearing in mind the cause of justice, the Supreme Court has allowed for the voluntary administration of the Narco-analysis test, provided that the informed consent of the subject is present and specific legal safeguards are implemented.

IX. EVIDENTIARY VALUE AND ADMISSIBILITY OF NARCO-ANALYSIS TEST

The Indian Evidence Act of 1872, which serves as the main legal statute governing the admissibility of evidence in courts throughout the country, is devoid of a specific provision addressing the admission of evidence obtained through a Narco-analysis test. However, the Indian judiciary has approached the admissibility of lie detection tests, including Narco-analysis, in several judgments, with some cases allowing their acceptance and others ruling against it. The combined effect of Sections 24 to 27 and Section 32 of the Indian Evidence Act would prevent these statements from being admitted as evidence if there is even the slightest doubt of coercion, intimidation, or fear that the statement was not given freely and honestly, or if the subject was harassed or coerced by the police prior to the test. In such cases, these statements would hold no value.

⁶¹ *Maneka Gandhi v. Union of India*, (1978) 1 SCC 248.

⁶² *Id.*

⁶³ *Stefanelli v. Minard*, (1952) 342 US 117.

⁶⁴ *Rochin v. California*, 342 US 165 (1952).

⁶⁵ *Supra* note 59.

Section 3 of the Indian Evidence Act, 1872, defines “Evidence” as hereunder:

- “(1) All statements which the Court permits or requires to be made before it by witnesses, in relation to matters of act under inquiry; such statements are called oral evidence;
- (2) All statements including electronic records produced for the inspection of the Court; Such statements are called documentary evidence.”⁶⁶

The issue at hand is to discern whether a statement recorded during a Narco-analysis test can be admitted as evidence in a court of law. According to the principles of criminal jurisprudence, a person must be in a sound state of mind for their statement to be admissible.⁶⁷ The evidentiary value of the Narco-analysis test is comparable to that of a statement given by someone who is semi-conscious. Ultimately, the court has discretion over the admissibility of such statements.

In *Selvi v. State of Karnataka*⁶⁸, the Supreme Court observed that if a Narco-analysis test is performed on an accused, any statements or findings derived from that test would be considered statements made to the police and is therefore not admissible as evidence. The statement does not constitute a confession. However, it can be used under Section 27 of the Evidence Act to the extent that it led to the discovery of a fact.⁶⁹ Further, reference was made to Section 25 of the Evidence Act and it was held that Section 25 explicitly states that confessions made to a police officer cannot be proven against an accused person. Such confessions are deemed involuntary and are irrelevant, regardless of their form - whether direct, express, implied, or inferred from conduct.

Thus, any information or material uncovered as a result of a Narco-analysis test administered voluntarily can be admissible under Section 27 of the Evidence Act, 1872. If a statement recorded during the Narco-analysis test is supported by other relevant facts, it may be deemed admissible. Even if the subject has provided consent to undergo a Narco-analysis test, the outcomes of the test cannot be considered as evidence independently because the person does not have conscious control over their responses while taking the test.

X. PARADIGM GUIDELINES CONDUCTION OF NARCO-ANALYSIS TEST WITH RECOMMENDATIONS

The author is of the view that there must be a law regulating the conduction of the Narco-analysis test in India and such law must be drafted by the legislature into a statute. In the absence of such a law governing Narco-analysis, the author put forwards model guidelines or standards that must be adhered to while conducting a Narco-analysis test, along with certain recommendations:

10.1 NARCO-ANALYSIS TEST AS A LAST RESORT

First and foremost, it is important to consider Narco-analysis as a ‘last resort’ when conducting investigations. This method should not be perceived as a replacement for the established investigative procedures acknowledged by criminal procedural laws. Rather, its intent is to revive and refocus investigations that have reached an impasse despite exhaustive efforts and the exploration of every available alternative.

10. 2. DECISION RESTS WITH THE COURT

The decision on whether or not to employ Narco-Analysis should be taken by the Judicial Magistrate or the Trial Court after assessing the status of the investigation and determining if traditional means of investigation have been exhausted. various aspects regarding the detention, such as the duration of the detention and the type of questioning must also be taken into account by the Magistrate while reaching a

⁶⁶ The Indian Evidence Act, 1872, §3, No. 1, Acts of British Parliament, 1872 (India).

⁶⁷ Colin Tapper, *The Law of Evidence and the Rule of Law*, 68(1) CAMBRIDGE L.J., 67 – 89 (2009), <https://www.jstor.org/stable/40388772>.

⁶⁸ *Supra* note 58.

⁶⁹ The Indian Evidence Act, 1872, §27, No. 1, Acts of British Parliament, 1872 (India).

decision. The Judicial Magistrate or the Trial Court should exercise caution when obtaining the consent of the accused and must ensure that the consent is given willingly. The Magistrate will take into account

10. 3. NARCO-ANALYSIS TEST AS A ONE-TIME MEASURE

Narco-analysis test must be a 'one-time measure' during an investigation so as to encourage investigative agencies to exercise greater caution when requesting this procedure, ensuring that it is used sparingly and only on a single occasion.

10. 4. INFORMED CONSENT OF THE SUBJECT IS A MUST

As reiterated by the Supreme Court in several cases⁷⁰, the informed consent of the accused must be obtained prior to a Narco-analysis test. The term 'informed consent' denotes that the accused is thoroughly briefed on the technical intricacies of the procedure, the effects of the narcotics utilised in the interrogation, and the potential repercussions of undergoing the test: physical, psychological, and legal. This understanding serves as the foundation for the accused to grant voluntary consent, a process that necessitates documentation through the mandatory signing of a form.

10. 5. APPLICATION OF NHRC GUIDELINES ON ADMINISTRATION OF LIE DETECTOR TEST TO NARCO-ANALYSIS

The National Human Rights Commission has proposed a set of guidelines for administering lie detector tests⁷¹, which must be applied to the conduction of Narco-analysis in the proposed manner:

- a. The accused must be apprised of the physical, emotional, and legal consequences associated with undergoing such a test.
- b. The accused should understand that any statements provided during the test will not be considered as valid evidence in a court of law. They must be informed about the pertinent legal provisions safeguarding their rights in this matter.
- c. The accused should be given the final choice to undergo the test, and their consent should be documented in writing before a Judicial Magistrate. The consent form should mandatorily be signed by the accused, along with the counter-signature of their lawyer.

10. 6. QUESTIONNAIRE OF NARCO-ANALYSIS TEST

The process of questioning the defendant must involve asking open-ended questions, allowing the subjects to freely recall all relevant information from their memory. This approach will ensure that the investigating officers do not manipulate the defendant by asking leading or suggestive questions, especially considering the subject's vulnerable mental state when under the influence of drugs.

10. 7. QUESTIONNAIRE TO BE REVIEWED BY THE DEFENCE LAWYER

To protect the accused's vulnerable mental state from being exploited, it is essential for the accused's lawyer to review the questionnaire, which is framed by the Forensic Science Laboratory (FSL). This review should focus on the nature and structure of the questions being asked. This measure will further ensure that the principles of natural justice are upheld. Furthermore, the attendance of the accused's lawyer during the procedure is essential to guarantee that the authorities do not exploit the mental state of the accused in any way.

10. 8. THE RESULTS OF NARCO-ANALYSIS TEST AT TRIAL ARE NOT TO BE MENTIONED AT THE TRIAL

The Court must be apprised of the fact that a Narco-analysis test has been conducted during the investigation. Nonetheless, both the prosecution and the defence should be prohibited from referencing the results of the Narco-analysis test during the trial. This measure is in place to eradicate any potential

⁷⁰ Selvi v. State of Karnataka, (2010) 7 SCC 263.

⁷¹ NATIONAL HUMAN RIGHTS COMMISSION, INDIA, *Guidelines on Administration of Lie Detector Test*, <https://nhrc.nic.in/press-release/guidelines-administration-lie-detector-test> (last visited Sep. 1, 2025).

bias in the minds of the judges, ensuring that the judge remains uninformed of the procedure's outcomes throughout.

XI. PROPOSED AMENDMENT IN THE CODE OF CRIMINAL PROCEDURE

The Narco-analysis test is legally sanctioned in India under the revised Section 53 of the Code of Criminal Procedure (CrPC).⁷² An Explanation clause was added to Section 53 of the CrPC in 2005 through the Code of Criminal Procedure (Amendment) Act, 2005⁷³, with the pertinent portion stating the following: "Explanation- In this section and in Sections 53-A and 54,- (a) "examination" shall include the examination of blood, blood stains, semen, swabs in case of sexual offences, sputum and sweat, hair samples and finger nail clippings by the use of modern and scientific techniques including DNA profiling and **such other tests** which the registered medical practitioner thinks necessary in a particular case;"⁷⁴

The phrase 'such other tests' denotes a provision that allows for the recognition and inclusion of newly developed techniques in forensic science during investigative procedures. In *Santokben Jadeja v. State of Gujarat*, observing the same, the Court opined: "Section 53 of the Criminal Procedure Code has been brought on the statute book to have efficient and scientific investigation. It is intended to help in the investigation of the crime on scientific lines so as to enable collection of evidence to prove the guilt or innocence of the persons accused of committing the crime as the modern community requires modern scientific methods of crime detection, lest the public go unprotected."⁷⁵ From the above discussion, it can be deduced that aim of the inclusion of the expression 'such other tests' alongside the existing specified ones was to encompass future developments in forensic science, including methodologies like Narco-analysis.

Thus, Narco-analysis is authorised as a permissible investigative technique in accordance with the current provisions of the CrPC. However, for Narco-analysis to function as an efficient investigative tool, several prerequisites must be met, which the current version of the CrPC does not adequately address. There is no provision in the Code that explicitly mandates the consent of the accused during the investigation. Simply being recognised under the phrase 'such other tests' is inadequate for Narco-analysis test to function as an efficient investigative tool. Given the growing utilisation and significance of this procedure in the current landscape of criminal investigation, the author strongly advocates for the amendment of the Code of Criminal Procedure to include the necessary prerequisites for the Narco-analysis test. Last but not the least, the three pillars of criminal justice, namely, the police, the lawyers and the judiciary/courts must work in cohesion to truly realise the vast potentialities that the Narco-analysis test may hold in their common pursuit of truth and justice.

XII. CONCLUSION

Truth is the spirit and essence of justice, guiding and strengthening the fortress of human rights narrative. The Narco-analysis test, among various deception detection techniques, has appeared as a marvel that aids the law enforcement in eliciting the truth from an accused, suspect or witness, when traditional interrogation techniques have proven futile. In this paper, the author has reflected over various intricate issues surrounding the Narco-analysis test in the spheres of law, medicine, and ethics. The Narco-analysis test is an advancing science with vast potential to uncover truth. To unlock its potential and to employ it as an effective tool in investigation, the forensic community in collaboration with the legal fraternity must undertake further research on Narco-analysis as an interrogation tool to dispel the ambiguities about its precision and reliability. This, in turn, will empower the judiciary to administer justice with heightened accuracy.

⁷² The Code of Criminal Procedure, 1973, §53, No. 2, Acts of Parliament, 1974 (India).

⁷³ The Code of Criminal Procedure (Amendment) Act, 2005, §53, No. 25, Acts of Parliament, 2005 (India).

⁷⁴ *Id.*

⁷⁵ *Supra* note 28.

In cases where there is a conflict between the rights of individuals and the security of public interest, courts prioritise public interest by following the principle of “Jura publica anteferenda privatis juribus.”⁷⁶ To protect the rights of individuals undergoing the Narco-analysis test, the author has put forth a series of guidelines and recommendations to ensure the test is conducted effectively and within the bounds of the law. The pursuit of fair and equitable justice commences with an investigation that is both impartial and based on sound scientific principles. The principles of fairness and equity should underpin the criminal justice system. Regardless of the many concerns surrounding the Narco-analysis test, its significance and need in today’s circumstances is undeniable.

As society progresses, so does the complexity and diversity of crimes. Harnessing the power of scientific and technological progress is key to enhancing the effectiveness of interrogations and investigations within the criminal justice system. The truth behind the crime must be investigated using the lens of scientific analysis. Having said that, the Narco-analysis test must be resorted to in the ‘rarest of the rare’ cases and with necessary caution.

XIII. REFERENCES

- [1] George H. Dession et. al., Drug-Induced Revelation and Criminal Investigation, 62(3) YALE L.J. F., 315 (1953) <https://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=8176&context=ylj>.
- [2] A. R. Lakshmanan., Report on Use of Narco Analysis in Police Interrogation: Constitutionality, 3 MLJ CRL, 39 (2010), [report on use of narco analysis in police interrogation : constitutionality 2010 3 mlj crl 39.](https://www.mha.gov.in/sites/default/files/criminal_justice_system.pdf)
- [3] GOVERNMENT OF INDIA, MHA, Committee on Reforms of Criminal Justice System Report, (2003), https://www.mha.gov.in/sites/default/files/criminal_justice_system.pdf.
- [4] Paul Root Wolpe et. al., Emerging Neurotechnologies for Lie-Detection: Promises and Perils, 5(2) AJOB, 39 (2005), <https://www.tandfonline.com/doi/full/10.1080/15265160590923367?scroll=top&needAccess=true>.
- [5] Ananthi S. Bharadwaj & Sumithra Suresh, Narco Analysis And Protecting The Rights Of The Accused, 4(12) NSLR, 121 (2008), <https://nslr.in/wp-content/uploads/2019/03/NSLR-Vol-4-No-12.pdf>.
- [6] Kumaran M. Senthil, et. al., Deception Detection Tests: A Subdued Investigating Tool, 8(11) IJRR, 419 (2021), <https://doi.org/10.52403/ijrr.20211153>.
- [7] J. Starmi, Narco Analysis as a Human Rights Violation, 2 MLJ CRL, (2011) [NARCO ANALYSIS AS A HUMAN RIGHTS VIOLATION 2011 2 MLJ CrL 25.](https://www.jstor.org/stable/1141276?origin=crossref)
- [8] Fred E. Inbau, Self-Incrimination--What Can an Accused Person be Compelled to do?, 89 J. CRIM. L. & CRIMINOLOGY, 1329 (1998), <https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=7020&context=jclc>.
- [9] Andre A. Moenssens, Narcoanalysis in Law Enforcement, 52(4) THE JOURNAL OF CRIMINAL LAW, CRIMINOLOGY, AND POLICE SCIENCE, 453 (1961), <https://www.jstor.org/stable/1141276?origin=crossref>.
- [10] Abhyudaya Agarwal & Prithwiji Gangopadhyay, Use of Modern Scientific Tests in Investigation and Evidence: Mere Desperation or Justifiable in Public Interest?, 2(1) NUJS LAW REV, (2009), <http://nujlawreview.org/2016/12/03/use-of-modern-scientific-tests-in-investigation-and-evidence-mere-desperation-or-justifiable-in-public-interest/>.
- [11] Zaheeruddin & Asma Sultana, Testing the Validity of Narco-Analysis on Touchstone of Article 20(3) of the Constitution, 23 ALJ, 65 (2016), [Validity of Narco-Analysis on Touchstone of Article 20\(3\).pdf](https://www.jstor.org/stable/1141276?origin=crossref).
- [12] Mridula Mishra, The Philosophy and Reality of Medical Ethics, 8 CNLU LJ, 1 (2019) [J CNLU LJ 8 201819 1 ul20ba026 xustudenteduin 20231015 215610 1 9.pdf](https://www.jstor.org/stable/1141276?origin=crossref).
- [13] A.R. Lakshmanan, New Advances in the Field of Forensic Science and Medical Jurisprudence, 1 LW (JS), 85 (2005), [New Advances in the Field of Forensic Science and Medical Jurisprudence.pdf](https://www.jstor.org/stable/1141276?origin=crossref).

⁷⁶ Chandi Prasad Uniyal & Ors. v. State of Uttarakhand & Ors., (2012) 8 SCC 417.

- [14] Suresh Bada Math, Supreme Court judgment on polygraph, narco-analysis & brain-mapping: A boon or a bane, 134(1) INDIAN J MED RES., 4 – 7 (2011), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3171915/>.
- [15] SCC ONLINE, Accused cannot be subjected to narcoanalysis, polygraph and BEAP tests against his will & consent, (Apr. 16, 2016) <https://www.scconline.com/blog/post/2016/04/16/accused-cannot-be-subjected-to-narcoanalysis-polygraph-and-beap-tests-against-his-will-consent/> (last visited Sep. 1, 2025).
- [16] Indu Rani, Evidentiary Value of Narco-Analysis Test, 9(5) INTERNATIONAL JOURNAL OF RESEARCH IN SOCIAL SCIENCES, 1021 (2019), https://www.ijmra.us/project%20doc/2019/IJRSS_MAY2019/55-Evidentiary%20Value%20of%20Narco-Analysis%20Test-indu-May19rss-AMIT.pdf.
- [17] Taniya Jaiswal, Narco Analysis: Unearthing the Truth, SIFS India (2020) <https://www.sifs.in/blog-details/narco-analysis--:unearthing-the-truth/54> (last visited Sep. 1, 2025).
- [18] The Code of Criminal Procedure, 1973, No. 2, Acts of Parliament, 1974 (India).
- [19] The Indian Evidence Act, 1872, No. 1, Acts of British Parliament, 1872 (India).
- [20] G. P. TRIPATHI, MEDICAL LAW, (Satyam Law International 2020).
- [21] M. P. JAIN, INDIAN CONSTITUTIONAL LAW, (Lexis Nexis 2018).
- [22] DD BASU, INTRODUCTION TO THE CONSTITUTION OF INDIA (Lexis Nexis 2019).
- [23] R. V. KELKAR ET. AL., CRIMINAL PROCEDURE, (Eastern Book Company 2022).
- [24] V. P. SARATHI ET. AL., LAW OF EVIDENCE, (Eastern Book Company 2022).

