



INDIAN JOURNAL OF LEGAL REVIEW

VOLUME 6 AND ISSUE 9 OF 2026

INSTITUTE OF LEGAL EDUCATION



INDIAN JOURNAL OF LEGAL REVIEW

APIS – 3920 – 0001 | ISSN – 2583-2344

(Open Access Journal)

Journal's Home Page – <https://ijlr.iledu.in/>

Journal's Editorial Page – <https://ijlr.iledu.in/editorial-board/>

Volume 6 and Issue 9 of 2026 (Access Full Issue on – <https://ijlr.iledu.in/volume-6-and-issue-9-of-2026/>)

Publisher

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“NARCO ANALYSIS LIE DETECTOR TEST AND FUNDAMENTAL RIGHTS: A STUDY WITH SPECIAL REFERENCE TO INDIAN CRIMINAL JUSTICE SYSTEM”

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BEST CITATION – PRANJAL KUKRETI & ASST PROF. UJJAWAL KUMAR SINGH, “NARCO ANALYSIS LIE DETECTOR TEST AND FUNDAMENTAL RIGHTS: A STUDY WITH SPECIAL REFERENCE TO INDIAN CRIMINAL JUSTICE SYSTEM”, *INDIAN JOURNAL OF LEGAL REVIEW (IJLR)*, 6 (9) OF 2026, PG. 581-588, APIS – 3920 – 0001 & ISSN – 2583-2344.

ABSTRACT

Narco analysis and lie detector tests have emerged as controversial investigative techniques within the Indian criminal justice system. These scientific methods are primarily used to extract information from suspects and accused persons during criminal investigations. However, their application raises significant constitutional and human rights concerns, particularly regarding the protection of fundamental rights guaranteed under the Constitution of India. The involuntary administration of narco analysis, polygraph tests, and brain mapping has been criticized for violating the right against self-incrimination under Article 20(3), the right to life and personal liberty under Article 21, and the right to privacy. The landmark judgment of the Supreme Court in Selvi v. State of Karnataka significantly restricted the compulsory use of such techniques. This study examines the legal validity, constitutional implications, judicial approach, evidentiary value, and ethical dimensions of narco analysis and lie detector tests within the framework of the Indian criminal justice system and fundamental rights jurisprudence.

KEYWORDS: Narco Analysis, Lie Detector Test, Polygraph Examination, Brain Mapping, Fundamental Rights

INTRODUCTION

The advancement of forensic science and modern investigative techniques has transformed criminal investigations across the world. In India, narco analysis, lie detector tests (polygraph tests), and brain mapping emerged as tools used by investigating agencies to uncover concealed information from suspects, accused persons, and witnesses. Narco analysis involves the administration of drugs such as sodium pentothal to induce a semi-conscious state in which a person is believed to reveal

truthful information. Similarly, polygraph tests monitor physiological responses to determine deception. These methods gained prominence in high-profile criminal cases, terrorism investigations, and organized crime matters.

Despite their investigative utility, these techniques generated intense constitutional debate due to their intrusive nature. Critics argued that forced administration of such tests violates the fundamental rights guaranteed under Articles 20(3) and 21 of the Constitution of India. Questions regarding consent, mental

privacy, human dignity, reliability, and evidentiary admissibility became central concerns before Indian courts.

The Supreme Court of India addressed these issues comprehensively in *Selvi v. State of Karnataka*, where involuntary narco analysis and lie detector tests were declared unconstitutional. This study critically examines the relationship between these investigative methods and fundamental rights within the Indian criminal justice system.

1. CONCEPT AND NATURE OF NARCO ANALYSIS AND LIE DETECTOR TESTS

Narco analysis and lie detector tests are scientific investigative techniques employed to obtain information during criminal investigations. These methods are based on psychological and physiological principles aimed at detecting deception or extracting concealed information from individuals. In India, these techniques became increasingly popular during the early 2000s, particularly in terrorism-related cases and sensational criminal investigations.

Narco analysis refers to a procedure in which psychoactive drugs, commonly sodium pentothal or sodium amytal, are administered to a person to induce a hypnotic or semiconscious state. During this condition, the subject's ability to fabricate responses is believed to diminish, thereby enabling investigators to obtain truthful information. The technique is conducted by medical experts, psychologists, and forensic specialists under controlled conditions. Investigating agencies have often considered narco analysis useful in uncovering hidden facts, locating evidence, and identifying accomplices.

The lie detector test, also known as the polygraph test, measures physiological changes such as blood pressure, pulse rate, respiration, and skin conductivity while a person answers questions. The underlying assumption is that deceptive answers produce measurable physiological reactions. A trained examiner interprets these

responses to determine whether the subject is speaking truthfully.

Another related technique is brain mapping or Brain Electrical Activation Profile (BEAP), which measures brain responses to stimuli associated with a crime. Unlike traditional interrogation methods, these scientific techniques seek to penetrate mental processes and psychological responses.

Supporters of these techniques argue that they assist investigators in solving complex crimes where conventional evidence is insufficient. They claim that narco analysis and polygraph tests help in reducing custodial torture and physical coercion during interrogation. Furthermore, proponents assert that such techniques are necessary in cases involving terrorism, organized crime, and national security.

However, these techniques remain highly controversial due to concerns regarding reliability, scientific validity, and human rights violations. Medical and psychological experts have questioned the accuracy of statements made under the influence of drugs. A person undergoing narco analysis may experience hallucinations, confusion, suggestibility, or false memories, thereby reducing the reliability of the information obtained. Similarly, polygraph tests are not universally accepted as accurate indicators of deception because physiological responses can vary due to fear, stress, anxiety, or medical conditions.

The legal controversy surrounding these techniques primarily relates to consent and compulsion. When administered without voluntary consent, they may violate the constitutional rights of the individual. The involuntary extraction of information from a person's mind raises concerns regarding privacy, dignity, bodily integrity, and the right against self-incrimination.

In India, the use of these techniques became a major constitutional issue after several state investigating agencies began conducting compulsory narco analysis tests. The judiciary

eventually intervened to regulate their use and safeguard individual liberties. The evolution of judicial interpretation in this area reflects the balance between effective criminal investigation and protection of fundamental rights in a democratic society governed by the rule of law.

2. FUNDAMENTAL RIGHTS AND CONSTITUTIONAL PROTECTION

The Constitution of India guarantees several fundamental rights aimed at protecting individual liberty, dignity, and fairness within the criminal justice system. The use of narco analysis and lie detector tests directly impacts these constitutional safeguards, particularly Articles 20(3) and 21. The constitutional validity of such investigative techniques depends upon whether they respect these protections.

Article 20(3) provides that no person accused of an offence shall be compelled to be a witness against himself. This provision embodies the principle against self-incrimination, which forms a cornerstone of criminal jurisprudence. The objective is to protect individuals from coercive methods used by the State to extract confessions or incriminating statements. Narco analysis and polygraph tests involve extraction of information from the mind of the accused through scientific intervention. When conducted without consent, these techniques amount to testimonial compulsion and violate Article 20(3).

The Supreme Court in *Nandini Satpathy v. P.L. Dani* expanded the scope of Article 20(3) by emphasizing that protection against self-incrimination extends beyond courtroom testimony and includes police interrogation. The Court recognized the importance of preserving mental privacy and human dignity during criminal investigations.

Article 21 guarantees the right to life and personal liberty except according to procedure established by law. Judicial interpretation has widened Article 21 to include the right to privacy, bodily autonomy, mental integrity, and human dignity. Narco analysis and lie detector tests involve intrusion into the mental processes of an

individual and administration of substances affecting consciousness. Such procedures interfere with bodily integrity and mental privacy.

The Supreme Court in *K.S. Puttaswamy v. Union of India* recognized privacy as a fundamental right under Article 21. Although this judgment primarily concerned informational privacy, its principles are relevant to narco analysis because involuntary extraction of thoughts violates cognitive freedom and mental autonomy.

Another important constitutional aspect is the right to fair trial. The criminal justice system must ensure that evidence is obtained through lawful and fair means. Statements made under the influence of drugs may not be voluntary or reliable. Therefore, the use of such methods undermines procedural fairness and due process.

The doctrine of informed consent also plays a crucial role. Consent must be voluntary, informed, and free from coercion. If a person willingly agrees to undergo narco analysis or polygraph examination with proper legal safeguards, courts may permit limited use of these techniques. However, forced administration remains unconstitutional.

The constitutional framework of India prioritizes individual dignity over investigative convenience. Although effective investigation is essential for maintaining law and order, the State cannot employ methods that compromise fundamental rights. Democratic governance requires balancing societal interests with personal liberties.

Therefore, the constitutional debate regarding narco analysis and lie detector tests reflects the broader tension between crime control and protection of civil liberties. Indian constitutional jurisprudence increasingly favors human rights-oriented criminal procedures that uphold dignity, fairness, and autonomy within the justice system.

3. JUDICIAL APPROACH TOWARDS NARCO ANALYSIS IN INDIA

The Indian judiciary has played a significant role in determining the legality and constitutional validity of narco analysis and lie detector tests. Initially, courts adopted varying approaches regarding the admissibility and permissibility of these investigative techniques. However, over time, judicial interpretation evolved toward stronger protection of fundamental rights and individual liberties.

In the early phase, some courts permitted the use of narco analysis and polygraph tests in exceptional circumstances. Investigating agencies argued that these methods were necessary for solving complex criminal cases involving terrorism, organized crime, and serial offences. Courts occasionally allowed such tests, particularly when the accused consented or when public interest considerations were emphasized.

One of the important cases before the Supreme Court was *State of Bombay v. Kathi Kalu Oghad*, where the Court distinguished between testimonial evidence and physical evidence. The Court held that providing fingerprints, handwriting samples, or physical evidence did not amount to self-incrimination under Article 20(3). Investigating agencies later attempted to justify narco analysis by arguing that scientific techniques merely facilitated evidence collection rather than compelling testimony.

However, the judiciary gradually recognized the invasive nature of narco analysis and polygraph tests. High Courts expressed concerns regarding reliability, voluntariness, and violation of personal liberty. Questions were raised about whether information obtained under the influence of drugs could truly be considered voluntary.

The landmark judgment in *Selvi v. State of Karnataka* fundamentally transformed the legal position regarding these techniques. In this case, the Supreme Court comprehensively examined the constitutional, scientific, ethical, and legal

implications of narco analysis, polygraph examination, and brain mapping. The Court held that involuntary administration of these techniques violates Article 20(3) and Article 21 of the Constitution.

The Court emphasized that forcing an individual to undergo such procedures amounts to testimonial compulsion because responses generated during the tests are based on personal knowledge and mental processes. The Court further observed that these techniques intrude into the subject's mental privacy and impair autonomous decisionmaking.

Importantly, the Court recognized that statements made during narco analysis are not always reliable because subjects may provide inaccurate, misleading, or imaginary information. Therefore, such statements cannot be directly admitted as evidence unless independently corroborated.

The Supreme Court also highlighted international human rights standards, including protections under the International Covenant on Civil and Political Rights (ICCPR), which prohibit cruel, inhuman, or degrading treatment and protect the right against selfincrimination.

Nevertheless, the Court permitted voluntary administration of these techniques under strict safeguards. Such safeguards include informed consent before a judicial magistrate, access to legal counsel, medical supervision, and protection against abuse.

The *Selvi* judgment represents a significant advancement in Indian constitutional jurisprudence. It reaffirmed the principle that criminal investigations must respect human dignity and fundamental rights. The judiciary thereby established that scientific advancement cannot override constitutional protections guaranteed to every individual within a democratic legal system.

4. EVIDENTIARY VALUE OF NARCO ANALYSIS AND POLYGRAPH TESTS The evidentiary value of narco analysis and lie detector tests remains one of the most debated issues in criminal law.

The Indian Evidence Act, 1872 governs admissibility of evidence in criminal proceedings, and courts have consistently examined whether information obtained through these techniques can be treated as reliable and legally admissible evidence.

Under the Indian legal system, confessions must be voluntary to be admissible in evidence. Sections 24 to 27 of the Indian Evidence Act exclude confessions obtained through inducement, threat, coercion, or improper influence. Since narco analysis involves administration of psychoactive drugs that impair consciousness and decisionmaking ability, statements made during such tests raise serious doubts regarding voluntariness.

Similarly, polygraph tests do not directly prove guilt or innocence. They merely record physiological responses believed to indicate deception. These physiological changes may occur for reasons unrelated to lying, such as anxiety, fear, nervousness, or medical conditions. Therefore, courts remain cautious in relying upon polygraph results as conclusive evidence.

In *Selvi v. State of Karnataka*, the Supreme Court clarified that statements obtained during involuntary narco analysis, polygraph tests, or brain mapping are inadmissible because they violate constitutional protections. The Court held that results derived from such techniques cannot be admitted as substantive evidence in criminal trials.

However, the Court recognized a limited exception under Section 27 of the Indian Evidence Act. If information obtained during narco analysis leads to discovery of material facts or physical evidence previously unknown to investigators, that discovered evidence may become admissible. For example, if an accused reveals the location of a weapon during narco analysis and the weapon is subsequently recovered, the recovery itself may be admissible even though the original statement remains protected.

Another important issue concerns scientific reliability. Internationally, many courts and scientific organizations question the accuracy of polygraph examinations and narco analysis. False positives, examiner bias, suggestibility, and psychological vulnerabilities reduce the dependability of these methods. Courts therefore require corroborative evidence before considering any investigative leads derived from such tests.

The National Human Rights Commission (NHRC) also issued guidelines regulating the administration of polygraph tests. These guidelines emphasize informed consent, legal representation, medical examination, and humane treatment to prevent abuse and coercion.

Critics argue that excessive reliance on such techniques may weaken traditional investigative methods and encourage shortcuts in criminal investigation. Furthermore, misuse of these procedures can lead to wrongful accusations and violation of civil liberties.

Despite technological advancements, the Indian legal system prioritizes procedural fairness and reliability over mere investigative convenience. Courts continue to emphasize that criminal convictions must be based on legally admissible, credible, and independently verified evidence rather than involuntary scientific interrogation methods.

Thus, the evidentiary status of narco analysis and lie detector tests in India remains limited. These techniques may serve as investigative aids under voluntary conditions but cannot replace constitutional safeguards and established principles of evidence law within the criminal justice system.

5. HUMAN RIGHTS AND ETHICAL ISSUES

Narco analysis and lie detector tests raise serious human rights and ethical concerns because they directly affect bodily autonomy, mental privacy, dignity, and personal liberty. The use of these techniques within criminal investigations creates a conflict between the

State's interest in effective law enforcement and the individual's right to humane treatment and constitutional protection.

One of the primary ethical concerns relates to consent. Ethical medical and scientific practices require informed and voluntary consent before administering any procedure affecting a person's body or mind. Narco analysis involves injection of psychoactive drugs that alter consciousness and cognitive functioning. Conducting such procedures without genuine consent violates medical ethics and individual autonomy.

Mental privacy is another significant issue. Traditional interrogation methods focus on verbal communication, whereas narco analysis and brain mapping attempt to access internal mental processes. Critics argue that the human mind represents the final sphere of personal privacy, and forced intrusion into thoughts violates the dignity and autonomy of the individual.

International human rights law strongly protects individuals against coercive interrogation techniques. Article 7 of the International Covenant on Civil and Political Rights prohibits torture and cruel, inhuman, or degrading treatment. Similarly, the Universal Declaration of Human Rights recognizes the right to dignity and fair treatment. Compulsory narco analysis may amount to degrading treatment because it interferes with mental integrity and self-control.

Human rights organizations have repeatedly expressed concerns regarding misuse of these techniques by law enforcement agencies. There is a risk that vulnerable individuals may be pressured into "consenting" to tests without fully understanding their legal implications. Poor awareness, fear of police, and unequal power relations can undermine genuine consent.

Another ethical issue concerns scientific uncertainty. Medical experts have questioned whether individuals under narco analysis can distinguish between reality, imagination, and suggestion. False memories or fabricated

responses may emerge unintentionally. Therefore, relying upon such techniques can lead to miscarriages of justice and wrongful implications.

The use of these methods also raises concerns regarding stigmatization and public perception. Media coverage of narco analysis often portrays subjects as guilty even before trial, thereby undermining the presumption of innocence guaranteed under criminal law.

From an ethical perspective, criminal investigations should prioritize fairness, legality, and respect for human dignity. Scientific progress cannot justify invasive procedures that compromise constitutional values and civil liberties. Democratic societies require investigative methods that balance effective policing with protection of individual rights.

In India, judicial intervention has significantly strengthened human rights protection in this area. The Supreme Court's decision in *Selvi* reflects a constitutional commitment toward preserving dignity, autonomy, and fairness within the criminal justice system.

Ultimately, ethical criminal justice administration requires that scientific techniques operate within constitutional limits and international human rights standards. Respect for human dignity remains essential even when dealing with serious crimes and national security concerns.

6. NEED FOR REFORMS AND FUTURE PERSPECTIVES

The debate surrounding narco analysis and lie detector tests highlights the need for comprehensive reforms within the Indian criminal justice system. While scientific techniques may assist investigations, their use must remain consistent with constitutional values, human rights principles, and procedural fairness.

One of the major reforms required is strengthening conventional investigative methods. Excessive dependence on narco analysis and polygraph tests may weaken professional investigation standards. Police

agencies require better training in forensic science, cyber investigation, witness examination, evidence collection, and scientific crime detection techniques that do not violate fundamental rights.

There is also a need for clear legislative regulation regarding scientific investigative procedures. At present, the legal framework largely depends upon judicial decisions and administrative guidelines. Parliament should enact comprehensive legislation specifying conditions, safeguards, consent requirements, medical standards, and evidentiary limitations for such techniques. Statutory regulation would reduce arbitrariness and prevent misuse.

Judicial oversight must be strengthened to ensure accountability. Courts should carefully examine whether consent for such procedures is voluntary and informed. Magistrates must verify that individuals understand their rights, including the right to refuse participation without adverse consequences.

Another important reform concerns protection of privacy and data security. Information generated during scientific interrogation techniques involves highly sensitive personal data. Strict confidentiality measures should govern storage, access, and use of such information to prevent misuse or unauthorized disclosure.

Human rights education for law enforcement agencies is equally important. Investigators must recognize that effective policing and constitutional rights are not mutually exclusive. Respect for dignity and procedural fairness enhances public trust in the criminal justice system and strengthens rule of law.

India should also adopt international best practices regarding ethical forensic investigation. Several democratic countries restrict or prohibit compulsory narco analysis and polygraph examinations due to reliability concerns and human rights considerations. Comparative legal study can help India develop

balanced policies that combine scientific innovation with constitutional safeguards.

The future of criminal investigation increasingly involves artificial intelligence, digital forensics, biometric technologies, and neuroscientific tools. These developments may create new legal and ethical challenges related to privacy, consent, and surveillance. Therefore, Indian constitutional jurisprudence must continue evolving to protect cognitive liberty and mental autonomy in the digital age.

Public awareness regarding legal rights also requires improvement. Citizens should understand protections against coercive interrogation and unlawful investigative practices. Legal aid services and access to legal representation are essential safeguards for vulnerable individuals during criminal investigations.

Ultimately, reforms must ensure that the pursuit of justice does not compromise constitutional morality and human dignity. Scientific advancement should complement, not undermine, democratic principles and fundamental rights. A rights-oriented criminal justice system strengthens both public confidence and the legitimacy of law enforcement institutions in India.

CONCLUSION

Narco analysis and lie detector tests represent the intersection of scientific investigation and constitutional law within the Indian criminal justice system. Although these techniques were introduced with the objective of improving criminal investigation and uncovering concealed information, their use generated serious legal, ethical, and constitutional concerns. The involuntary administration of such procedures directly affects the right against self-incrimination under Article 20(3), the right to life and personal liberty under Article 21, and the broader principles of dignity, privacy, and fair trial.

The Indian judiciary, particularly through the landmark judgment in *Selvi v. State of Karnataka*,

established clear constitutional limitations on the use of narco analysis, polygraph tests, and brain mapping. The Supreme Court emphasized that scientific advancement cannot override fundamental rights and human dignity. The Court rightly recognized that involuntary extraction of information from an individual's mind amounts to testimonial compulsion and violates constitutional protections.

At the same time, the debate highlights the importance of balancing effective law enforcement with civil liberties. Criminal investigation is essential for maintaining public order and justice; however, investigative methods must remain lawful, humane, and reliable. Scientific techniques lacking sufficient reliability and voluntariness cannot become substitutes for proper investigation and admissible evidence.

Future reforms should focus on strengthening conventional forensic methods, improving police training, enhancing judicial oversight, and establishing clear statutory safeguards governing scientific investigative procedures. Ultimately, a democratic criminal justice system must ensure that the pursuit of truth does not compromise constitutional morality, individual autonomy, and human rights. Protection of fundamental rights remains essential even in the investigation of the most serious crimes.

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ISSN 2583-2344



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