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Applicability of the Modern Scientific Test in Criminal System in India: Critical Appraisal in respect to Public Interest

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ABSTRACT

“Most Indian investigators work towards getting a confession rather than investigating the case. It is the easiest way to get a conviction in court - and the laziest “

- Avirook Sen, Aarushi

Forensic science is an occupational field that is inextricably rooted in the essence of criminal legislature and operates within the boundaries of the legal system and may make a significant contribution to advancing justice in criminal investigations and other severe transgressions.

Although India has established significant precedents to demonstrate the validity of these forensic examination, they breach the accused's fundamental rights against self-incrimination, health and privacy

The legal standing of scientific tests like as polygraph, P-300, and narco analysis is being questioned since these tests have recently received judicial acceptances that they did not previously obtain.

While the tests may be a practical necessity, there is an exigency for serious consideration regarding it procedural, constitutional and medico-legal legitimacy from the standpoint of human rights.

Keywords: *Criminal investigation, P-300, Polygraph, Narcoanalysis.*

I. INTRODUCTION

The field of truth verification by psychophysiological analogies, known as contemporary polygraphy, has origins that date back thousands of years, yet it is a relatively recent field.

Indian priests soaked a donkey's tail in the carbon residue from an oil lamp and put it inside a dark tent about 1500 BC. The suspects were sent inside and informed that they would find out who the liar was if they tugged the "magic" tail (they were allowed to believe that the donkey would scream if the perpetrator did so). As the suspects emerged from the tent, the priests

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examined their hands. They surmised that the reason the ones with clean hands didn't touch the tail was that they were scared of being caught lying.

In ancient China, a lie detector made of dry rice was used to infer guilt. The Chinese thought that when someone experienced extreme mental pain, such extreme dread, they would cease salivating. The suspect would be asked a number of relevant questions while being forced to hold a piece of dry rice in their mouth by a "examiner." The rice was going to be analyzed after the questioning. They would claim that the defendant was lying if the rice was dry. It was believed at the time that lying would produce nervous tension, which would slow or stop saliva flow. This still holds true in the modern day.

One definition states that the term "forensic" describes the use of scientific understanding to resolve legal issues. A collection of fields together referred to as "forensic science" are focused on using their scientific expertise to support judicial, criminal, civil, and law enforcement proceedings.

Examining a crime scene, gathering evidence, reviewing evidence, interpreting findings, and presenting conclusions or findings for use in court are all part of forensic investigation. Forensic evidence is gathered at the crime site, examined in a lab, and presented in court as part of the inquiry. In both civil and criminal cases, forensic evidence analysis is employed during the investigation and prosecution phase. Often, it can assist in establishing a prospective suspect's guilt or innocence. Another method for connecting ostensibly similar crimes is forensic evidence.

II. TYPES OF FORENSIC TESTS

- P-300, commonly referred to as brain mapping. In the brain-mapping test, the witness is questioned using three different types of questions: neutral words that are directly related to the case, probe words that attempt to elicit information that the accused has withheld, and target words that contain findings that are relevant to the case but are unknown to the suspect. The accused individual taking the exam is not asked to answer orally; they are only asked to listen to the words. The suspect's brain would evaluate the phrases, and if it found any connection between the words and stimulation, it would release what are called P-300 waves, which sensors would pick up on. The test results, which are examined by a specialist, can be used to infer the areas on which the suspect possesses information. Subsequently, detailed inquiries on the specific topics he is expected to know can be directed towards him. Conventional questioning methods are also available, as is the use of additional scientific tests like narco-analysis or the polygraph. As a result, the test's

results allow one to determine whether the accused has or is hiding any pertinent information.

- **POLYGRAPH OR LIE DETECTOR** The test entails attaching external devices to the body to monitor a number of parameters, including blood pressure, heart rate, sweat rate, and pulse. The test is based on the assumption that these variables will depart from their standard levels if someone deliberately makes a false statement. Asking questions for which the interrogator is aware of the answers establishes the standard levels. It is noteworthy that the subject's body is not directly invaded during this examination. However, a skilled individual who knows how to manage or conceal their arousal symptoms through yoga, meditation, and other techniques can easily ace a polygraph test. As a result, empirical research has frequently questioned the polygraph test's trustworthiness.
- Truth serum, also known as **NARCO ANALYSIS**, is a scientific study procedure that has generated controversy. Through this process, the subject's body is given three hours' worth of distilled water, 10% dextrose, and three grams of sodium pentothal administered by anesthetists. To use medical terminology, the medication that is administered exposes the subject's neuronal membranes in the brain to chloride ions, which inhibits them. This combination almost hypnotizes the subject, to the point where he can no longer control his emotions or his answers to questions. Stated differently, the person takes this sedative medication and becomes intoxicated. Because of this, the police will find it simpler to speak with the person and obtain the truth, which will help with their investigation. As was already said, this method is controversial because it involves giving the patient a medicine directly into their body. A mistake in the dosage or combination could put the patient in a vegetative state or possibly result in death. One may argue that the detectives engaged in a sophisticated form of violence in this instance.

III. PROTECTION AGAINST SELF-INCRIMINATION: INDIA'S SCIENTIFIC TESTS

Article 20(3) of the Indian Constitution prohibits pressuring someone who has been charged with a crime to testify against oneself. This is a basic right for the accused. In order to fully understand the significance of the provision, it is divided into several parts.

In *State of Bombay v. Kathi Kalu Oghad*³, the Supreme Court observed that the protection provided by this Article would apply to both the courtroom evidence and the earlier stages of

³ *State of Bombay v Kathi Kalu Oghad*, AIR 1961 SC 1808.

the accused's legal proceedings, even if the trial had not yet begun. Thus, the bar as specified in Article 20(3) would still be applicable even if the statements made in a narco-analysis test are made before the trial begins.

Nevertheless, it is conceivable for complainants or investigating authorities to mistakenly believe that a certain person committed the crime. In a situation like this, negative results from scientific testing could clear the guilty. This could only become apparent after the exam has been designed. Due to this, it has been determined that the challenge to the test's validity made at the time of its administration was premature. This insight has an intriguing outcome since it accepts the possibility that such data will be useful in the gathering of additional proof.

The term witness has not been defined in the Indian law. Under the Indian Evidence Act⁴, evidence is divided into two categories, oral and documentary. Oral evidence encompasses any statements that a witness is required or allowed by the court to make in regard to factual issues that are being investigated. All documents submitted for the court's review are considered documentary evidence. Although submitting a document does not automatically make someone a witness under the Indian Evidence Act, Article 20(3) of the Constitution protects against the forced production of incriminating documentary evidence. As a result, under the Constitution, someone who just produces a document in court qualifies as a witness and is shielded from incrimination by the forced production of the document.

(A) Compulsion

In the case of *Ramchandra Reddy v. State of Maharashtra*⁵, the Bombay High Court held that while conducting a scientific test could be coercive, questioning the subject afterward and their responses are not. This argument has some merit because the inquiry will take longer and the accused will remain in custody until they provide pertinent information or lie to the expert and instrument. Such prolonged durations of research will make the employment of coercive measures more likely. Nevertheless, it is challenging to bring this information to the court's notice due to the imbalance of power between the investigator and the accused.

The Supreme Court held in *Nandini Satpathy v. P.L. Dani*⁶ that coercion encompassed not only physical threats or violence but also psychological torture, atmospheric pressure, environmental coercion, and exhausting interrogative prolixity, among other tactics. Thus, it could be either mental or physical. Conditioning the mind with outside procedures can lead to

⁴ Indian Evidence Act, 1872, sec – 3

⁵ *Ramchandra Reddy v State of Maharashtra*, MANU/MH/0067/2004.

⁶ *Nandini Satpathy v PL Dani*, AIR 1978 SC 1025.

mental compulsion, in which making statements becomes second nature and eventually coerced.

We contend, based on an examination of the methods employed to carry out the analysis, that the hypnosis or sleep-like state created in the context of the narcoanalysis test leads to mental compulsion, as the Supreme Court explains: In both situations, the person is coerced into making statements against their will and is deprived of their mental autonomy and right to object. There might be a small distinction between the two: in the first instance, the subject lacks the capacity to exercise his or her will in response to the question; in the second instance, the subject possesses the capacity to respond to the question, but the circumstances prevent him or her from doing so. Either way, the effect is almost the same, therefore this is a negligible difference. The mere fact that the subject's body was forced to undergo an injection of a certain substance would constitute coercion and would trigger Article 20(3) immunity even if the subject gave the evidence voluntarily during the testing.

The Supreme Court held in *Selvi v. the State of Karnataka*⁷ that the Indian Constitution's Articles 20(3) and 21 were violated when forensic procedures like polygraphy were administered under duress without the accused's consent.

"Guidelines for the Administration of Polygraph Test (Lie-Detector Test) on an Accused" were published in 2000 by the National Human Rights Commission. The 'Narco- analysis technique' and the 'Brain Electrical Activation Profile' tests require careful adherence to these instructions and the application of comparable safety measures. The language of these guidelines is as follows:

- (i) Lie-Detector tests cannot be administered without the accused's permission. It is appropriate to give the accused the chance to take part in this kind of examination.
- (ii) Should the defendant agree to submit to a lie detector test, he ought to have access to legal representation and be informed by the police and his attorney of the psychological, physiological, and legal ramifications of the test.
- (iii) The consent needs to be formalized in front of a magistrate.
- (iv) At the magistrate's hearing, the individual who is said to have given consent ought to be represented by legal counsel.
- (v) The person in issue should be made fully aware throughout the hearing that the statement they make will not be considered a "confessional" statement to the magistrate, but rather

⁷ *Selvi v State of Karnataka*, AIR 2010 SC 1974.

will be treated as a statement to the police.

- (vi) The Magistrate is required to consider every facet of the detention, such as the duration of the detention and the nature of the interrogation.
- (vii) The Lie-Detector Test needs to be given in front of an attorney and documented by an unbiased organization (like a hospital).

IV. EVIDENTIARY VALUE

Sections 45 to 51⁸ of the Indian Evidence Act cover the significance of third-party opinions, which are commonly referred to as experts' opinions in daily practice. These provisions depart from the conventional process, which states that testimony should only be given regarding subjects about which the witness is knowledgeable. The exception is based on the premise that the court need the assistance of experts with specialized knowledge and competence in order to reach a decision on technically and professionally complex matters. To accept an expert opinion, the following requirements must be met:

- a) That the issue cannot be resolved in the absence of expert advice; and b) That the witness presenting the view is, in fact, an expert.

Sec 45 If the court has to form an opinion upon foreign law, Science, Art, Identity of handwriting or Finger impression the opinion of the persons who are especially skilled. In the case of *Murari Lal v. State of M. P*⁹, the court was of the opinion that while deciding the relevancy of opinion of an expert it shall corroborate it along with the other relevant evidences before reaching to the conclusion of accepting or rejecting it.

In the *Mahmood v. State of Uttar Pradesh*¹⁰ decision, the Supreme Court defined the term expert and stated that convicting someone only on the testimony of an expert would be extremely dangerous. Sections 53 and 53A of the 1973 Code of Criminal Procedure require the use of expert evidence in specific instances, notwithstanding the fact that employing expert testimony in prosecutions is dangerous.

V. IMPACT ON FUNDAMENTAL RIGHTS

(A) Right to privacy

The right to privacy, in broad words, is the "right to be alone." While it is now clear that the right to privacy exists as an inherent right guaranteed by the Indian Constitution, its nature and

⁸ Indian Evidence Act, 1872, Sec 45-51

⁹ *Murari Lal v State of M.P*, [1980] 1 SCC 704.

¹⁰ *Mahmood v State of U.P*, Criminal No. 12459 of 2022.

scope remain unknown. The judiciary has been noticeably quiet on the scope of the right. According to *Govind v. State of M.P.*¹¹, the right to privacy must be developed on a case-by-case basis. Another point raised in *People's Union for Civil Liberties (PUCL) v. Union of India*¹² was that the scope of the right may be too broad and that defining it judicially may be too moralistic.

They have been challenged primarily on the basis of a violation of Article 20 (3)'s protection against self-incrimination, and in some cases on the basis of a violation of Article 21, where the rights allegedly violated are the Right to Liberty (in the context of the accused's forced movement to various parts of India to carry out the tests) and the Right to Health.

However, it has been claimed that the lie detector does not physically violate the body, and that the brain-mapping test does not need direct bodily violation in the literal sense of the term, but rather just touching the person's physique. The judgement, however, was restricted to an allegation that the tests represent an invasion of the body and breach Article 20(3) by being obsessive, rather than the right to privacy under Article 21. Nonetheless, in cases where the challenge was not based on that premise, courts have offered their opinion on whether the administration of scientific testing would violate the right to privacy, which may be deemed obiter. It has been maintained that the right to privacy is not violated since it is not an absolute right, and that it is the statutory obligation of every witness who has knowledge of the crime's action to assist the State in gathering evidence on it. A person, on the other hand, cannot be forced to undertake statutory responsibilities that violate a basic right.

While we agree that the right to privacy is not absolute, we feel that in some cases, such as when collecting personal information, the unfettered administration of scientific testing may violate the right. Given that the state's primary and legitimate goal is crime control, and that brain mapping and lie detector tests are limited to external contact with the accused's body and do not violate his or her bodily autonomy, we can reasonably conclude that brain mapping and lie detector tests do not violate an individual's right to privacy. However, we believe that the narco-analysis test is unique from the other two tests since it involves the forced injection of a drug into the body of an accused.

1. Which scientific tests are expressly authorized?

A medical practitioner may examine an accused at the request of a police officer under the Criminal Procedure Code of 1973 (hereinafter the Code). He must, however, be arrested on a

¹¹ *Govind v State of M.P.*, AIR 1975 SC 1378.

¹² *PUCL v UOI*, AIR 1997 SC 568.

charge of conducting such an act, and it must be alleged that the act was conducted under such circumstances that there are reasonable grounds to suspect that an examination of his person would reveal evidence of the commission of an offence.

Despite all the scientific and legal restrictions that prevent the test results from being used as evidence in a court of law, the test almost always gives reasonable cause to believe that the results will provide clues for an investigation because the same level of accuracy required in a trial is not required in an investigation. The question here is whether, in the first place, the phrase presumes such a test. If so, does this mean that the test can be done in almost any situation as a matter of fact?

The High Courts agreed that the narco-analysis test would be given as part of the examination under the Criminal Procedure Code. In *Smt. Selvi v. State*¹³, the Karnataka High Court rejected the contention that putting medicine into the accused's body was not the same as taking a sample of his blood or sperm.

While the injection of a drug may cause pain (and in that sense, it may technically amount to pain), the same pain will result from a blood test. A blood test is permissible under the Criminal Procedure Code, inasmuch as the Code permits reasonable force to be used during an examination.

Section 53¹⁴ allows the police to conduct the examination officer who is a Sub-Inspector or higher. There is a practice test. It is stated that this occurs most frequently when there are exceptionally terrible crimes, and this has huge ramifications for the social fabric of a nation like murder or attempted treason. Authorization It is possible to have a judge take the test, which lends legitimacy to the plan because it is an independent license from the justice institution.

However, this is not a legal need, and the test can be performed without such approval. As a result, the test is open for misuse, and rules must be implemented to avoid its mismanagement.

(B) The right to health

Health has long been seen as an entitlement that cannot be taken away in accordance with Article 21. For example, the Kerala High Court rejected an argument based on the fact that a barbiturate used during a drug test for narcotics had serious side effects in the *Rojo George* case¹⁵, The High Court held that this was unconstitutional because the same pharmaceuticals

¹³ *Selvi v State of Karnataka*, AIR 2010 SC 1974

¹⁴ Code of Criminal Procedure Code, 1973, Sec- 53

¹⁵ *Rogo v Police*, 2006 (2) KLT 197

are used as treatments for patients, even though they have adverse effects. Similarly, X-rays and CT scans are used to diagnose diseases, even though they may have adverse effects.

However, this argument is flawed because it does not distinguish between medication that is slightly harmful in itself and medication that has been taken with the consent of the sick person in order to achieve the net benefit in their health. In contrast, scientific trials do not have either of these characteristics.

As a test for the interpretation of the Article by the judicial authorities, the method shall also be just, equitable and proportionate. Such a method would not be hard to devise. It may be based on a charge of a serious crime with a declared punishment penalty of at least a minimum. It may also be based on Court authorization. The test conditions, the measures to be applied by medical staff while administering the drug to the accused and the methods of questioning by the police when the accused is using the drug can be prescribed to prevent police abuse and excessive use as well as unwanted accidents.

VI. CONCLUSION

Medical and forensic evidence is commonly acknowledged as being critical in assisting courts of law in obtaining fair verdicts. As a result, competent medical practitioners should be encouraged to participate in medicolegal activity, and the courtroom should be welcoming to medical witnesses. This is critical when it comes to the outcome of a case because if qualified specialists refuse to appear in court, less objective professionals will fill the hole, affecting justice.

Various organizations have seen the necessity to incorporate an expanding number of specialists in expert evidence. For criminal investigations, narco-analysis and DNA testing have shown to be helpful and beneficial technologies that have a significant impact on both the innocent and the guilty, speeding up the legal process.

This criterion should be employed sparingly, only when the interests of society as a whole are jeopardized. To replace the brutal third-degree method, more refined and sophisticated questioning procedures are required. The criminal procedure, evidence, and institutional infrastructure standards created over a century ago are today deemed insufficient to fulfil the scientific community's expectations.
