*Page 4970 - 4977* **DOI:** *https://doij.org/10.10000/IJLMH.119568*

# INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

**Volume 8 | Issue 2**

**2025**

# Evidentiary Value of Lie Detector in the Indian Legal System

ANURAG SINGHA[1]

## ABSTRACT

*Since the dawn of humanity, it has been a very characteristic of every human being to lie. The necessity for lying may be for any reason. It may be to protect oneself or loved ones, or it may be for any gain, etc. The criminal justice system's focus has always been to establish the true facts before the court of law. Now, what is the best way to know the truth than to see the truth from the accused himself? Thus came the lie detector test. This device works on the presumption that a person telling the truth would have a different physiological change than someone lying. This device has been used routinely in many criminal investigations, even though it has been banned in certain countries. Its use in criminal investigation and its evidentiary value remains highly debatable. In this paper, the researcher will analyse why polygraph results hold very little or no evidentiary value in criminal trials.*

***Keywords****: Criminal Justice System, Lie Detector test, Evidentiary Value, Polygraph.*

## I. INTRODUCTION

The use of scientific tests, such as polygraph examinations, in the legal realm has long been a subject of debate and controversy. Polygraphs, often called "lie detectors," measure bodily responses (e.g., respiration, heart rate, and skin conductivity) to assess whether an individual is lying. The whole working of the device is based on the assumption that any deceptive behaviour by a person triggers a specific psychological response. While lying, a person may control his facial expression and voice. However, he may be unable to control other involuntary actions like blood pressure, heart rate, respiration, sweating, etc. While polygraphs have gained popularity in various contexts, including criminal investigations and pre-employment screening in various countries, their admissibility and reliability in courtrooms remain highly contested. This paper explores the polygraph's role in trial proceedings, examining the scientific principles behind the test, its accuracy, and the ethical concerns associated with its use. Although widely considered unreliable as a definitive measure of truth or deception, polygraph results are sometimes presented as evidence in trials or used during plea negotiations. The paper also

[1] Author is a LL.M. student at the West Bengal National University of Juridical Sciences (WBNUJS), India.

 [ISSN 2581-5369]

analyzes the challenges courts face in evaluating polygraph results, the potential for misuse, and the broader implications for justice.

It must be noted that this machine does not detect lies but the physiological changes associated with lying. In India, polygraph testing raises critical questions about its evidentiary value, particularly in criminal investigations and trials. Polygraphs measure bodily responses—such as heartbeat rate, blood pressure, and galvanic skin response—to determine whether a subject is truthful. Polygraphs have a very high potential, but their scientific accuracy remains disputed. It is frequently contended that nervousness, medical conditions, examiner bias, etc., can lead to erroneous results, making the result inadmissible before the court of law.

## II. INTERPLAY BETWEEN SCIENCE AND LAW AND TECHNOLOGY

Traditionally, science and law were two distinct and independent disciplines. However, with time, science and technology have started to share a very intrinsic relationship with law. Science is a discipline that focuses on finding knowledge based on observable phenomena and by gathering and evaluating data. In contrast, the law, in a general sense, is a discipline that tries to set a uniform set of rules by the sovereign upon its subjects, which is made enforceable by way of punishment such as imprisonment, fine, etc. Although at first glance, these two seem to have no interlinkage with each other, however with the gradual passage of time, we see an interdependence of both.[2]

Law tries to protect the victims of new technology; for example, various nations have enacted their own cyber laws to regulate the internet. While, with the advancement of science and technology, the scientific expert evidence is also rapidly increasing. Science tries to aid the legal system with new advanced technologies such as polygraphs, DNA Tests, audio-visual recordings, autopsy, etc.[3] It can be stated that there exists a codependence between science and law in modern society. As such, science has found its way into substantive and procedural laws. Science has influenced procedural as well as substantive laws in several ways. Scientific methods such as DNA testing, fingerprint analysis, ballistics testing, toxicology reports, Polygraph tests, brain mapping, digital forensics, etc., have revolutionized how evidence is to be gathered and presented in court. Legal procedures now require specific protocols in regard to the collection, preservation and presentation of various scientific evidence to ensure its reliability and integrity. Similarly, the role of expert witnesses has become critical in legal proceedings. Experts in arenas such as medicine, psychology, engineering, etc., deliver

[2] Diganth Raj Sehgal, *Relationship between law, science, and technology in modern society*, iPleaders (2021), https://blog.ipleaders.in/relationship-law-science-technology-modern-society/ (last visited Nov 15, 2024).
[3] Ibid.

testimony to assist courts in understanding complex technical issues. This has led to precise procedural rules around experts' qualifications, their methods, and how their testimony is presented.

## III. POLYGRAPH

A polygraph, also known as a lie detector, is a multifaceted machine that measures various physiological changes in the human body, such as heartbeat, skin conductivity, breathing, pulse rate, and body temperature. Webster's Legal Dictionary expresses a polygraph as "an instrument for simultaneously recording variations of several different pulsations (as of physiological variables)".[4] The machine works on the presumption that specific physiological changes occur within a person's body whenever a person lies. The device thus becomes helpful in criminal investigations and has been used as a method of investigation by police and investigating agencies in many countries, including India. Polygraphs, along with Brain mapping and narco analysis, also known as the Deception Detection test, have always persisted as a very controversial method of investigation, as it had become an exceptional substitute for third-degree; however, due to the presumptive nature of these devices, it cannot be said to be one hundred per cent accurate and can be detrimental to the investigation at times.

## IV. A BRIEF HISTORICAL ASPECT OF POLYGRAPH

The polygraph, known as the lie detector, has a captivating past that links psychology, physiology, and technological advancements. The roots of the polygraph machine can be drawn back to the later part of the nineteenth century when researchers like Cesare Lombroso and William Marston studied the various physiological factors, such as heartbeat, pulse rate, etc., that can direct the mental state of an individual.

Cesare Lombroso created a device known as a hydrosphygmograph that measured blood pressure and pulse to evaluate the trustworthiness of individuals alleged to have engaged in criminal behaviour. Marston, in 1915, developed a comparable device that could measure blood pressure changes when a person is subjected to numerous questions. He believed people experience a physiological response when they lie, such as increased heart rate or blood pressure. This was one of the critical mechanisms used in today's Lie Detectors. In 1921, John Augustus Larson devised a machine that could be called as the first version of the Lie detector. This machine could measure nonstop variations in blood pressure, heartbeat and respiration,

[4] J.E. Clapp, *Webster's Legal Dictionary* (Random House Reference 1996).

which could be used to test whether a person is lying.[5] Subsequently, in the 1930s, Leonarde Keeler improved Larson's design by making the Polygraph more portable and reliable by adding a galvanic skin response (GSR) channel, making it more prominent among investigating agencies.[6] To this day, this machine is still being used worldwide with slight to no variations.

## V. BASIC WORKING PROCEDURE OF A POLYGRAPH

Theoretically, the working of a polygraph is based on a presumption that a person's physiological changes are in a way connected with a person's mental condition. In other words, it has been assumed that when a person lies, it arouses the brain to involuntarily accomplish specific physiological changes in the body that would not have occurred during the ordinary course.

During a polygraph test, several devices are attached to the examinee, which would measure the physiological changes. Then, the examinee is asked a set of questions that they have to answer. The examiner then reviews the results, analyses them, and predicts the credibility of the examinee's answers.[7]

There are several techniques for conducting a polygraph test, such as the Control-Question technique (CK), Guilty Knowledge Test (GKT), Concealed Information Test (CIT), etc. Out of these, the most common technique for performing lie detector tests is the Control-Question (CQ) technique. This technique makes use of two kinds of questions. The Control questions are specific questions that are not relevant to the investigation but are intended to make specific physiological changes in the individuals, and these questions frequently lead to false answers. The relevant questions, on the other hand, are associated with the investigation.[8]

Theoretically, an individual will showcase more tremendous physiological changes while answering a control question falsely than answering a relevant question that can be answered truthfully. However, the same individuals will show more tremendous physiological changes in answering a relevant question falsely than answering a control question with a lie. Simply speaking, a guilty person is expected to be more concerned with being deceitful about the relevant facts than other facts.[9]

[5] John Synnott, David Dietzel & Maria Ioannou, *A review of the polygraph: history, methodology and current status*, 1 Crime Psychology Review 59 (2015).
[6] Ibid.
[7] *Smt. Selvi v. State of Karnataka, AIR 2010 SC 1974 (India 2010).*
[8] Ibid.
[9] Ibid.

 [ISSN 2581-5369]

## VI. REASONS FOR POLYGRAPH TESTS HAVING NO EVIDENTIARY VALUE IN A CRIMINAL PROCEEDING

1. **Not 100% Accurate: -** One of the most controversial issues regarding polygraph tests is their accuracy. The accuracy rate of a lie detector machine is unpredictable. It is never a hundred per cent accurate. Its accuracy ranges between 60% to 90%. U.S. Attorney General John Ashcroft acknowledges that polygraphs used in federal agencies have a fault rate of about 15%.[10] There are numerous ways by which a person can trick polygraph results. The main reason polygraphs are unreliable is that they cannot differentiate between physiological changes that occur due to lies and physiological changes for any other factor.[11] The results can be altered by remaining calm throughout the test, which, although it is tough to perform, is not impossible. Another way is by being completely distressed and fearful throughout the whole test.[12] The test can also be overcome by identifying the control questions from the relevant questions and then by altering breathing during control questions and breathing normally during relevant questions. Other ways of changing the test results are by taking anti-anxiety medications or other drugs. Even caffeine, nicotine, allergy medication or cough medication are enough to alter the results as such medications may affect heart rate and blood pressure, thereby subsequently affecting polygraph results.[13] Another shortcoming of a lie detector test is that it may have errors if the examinee has certain conditions, such as heart disease, if a person is mentally incapable, etc. Although all these factors might not absolutely be able to beat a lie detector test, these can skew the test results, which is enough to make test results inadmissible before a court of law.[14]

2. **Not a complete science: -** Another shortcoming of the polygraph is that it is not purely a scientific device. The whole concept of the polygraph is based on the assumption that lying or deception has some connection with a person's physiological behaviour. Nevertheless, it has not been empirically established or conclusively proved. For any evidence to have any weigh before the court of law, it has to be reliable. Unlike oral testimony, which depends on a witness's deposition, scientific evidence is demonstrative. For admitting polygraph results as scientific evidence before the Court it has to be reliable and trustworthy. However,

[10] Katherine To, *Lie Detection: the Science and Development of the Polygraph*, USC Viterbi School of Engineering (2002), https://illumin.usc.edu/lie-detection-the-science-and-development-of-the-polygraph/ (last visited Nov 15, 2024).
[11] Rachit Garg, *Constitutional validity of the Deception Detection Tests (DDTs)*, iPleaders (2021), https://blog.ipleaders.in/constitutional-validity-of-the-deception-detection-tests-ddts/ (last visited Nov 15, 2024).
[12] https://www.facebook.com/thoughtcodotcom, *7 Tips to Pass a Lie Detector Test*, ThoughtCo (2019), https://www.thoughtco.com/how-to-pass-a-lie-detector-test-4150683 (last visited Nov 15, 2024).
[13] Ibid.
[14] Ibid.

 [ISSN 2581-5369]

it is impossible to conclusively prove that the physiological changes that are being measured by the lie detector are solely due to lying and not to any other factors.

3. **Against the Fundamental Right: -** "No person accused of any offense shall be compelled to be a witness against himself."[15] This right has been envisaged within Article 20(3) of the Indian Constitution. This underscores the fundamental principle that no individual shall be forced to testify against themselves or provide any evidence that may be self-incriminatory. Any breach of the right against self-incrimination also hampers the right to a fair trial. Our Criminal justice system is based on the maxim **"**Ei incumbit probatio qui dicit, non qui negat**",** which means an individual is always assumed innocent until proven guilty. The burden is always upon the prosecution to prove the accused's guilt beyond a reasonable doubt. In proving guilt, the accused cannot be compelled to make any self-incriminating statement.[16] Moreover, CrPC or the present BNSS does not contain any specific provision with regard to the procedure for giving consent to polygraph tests by the accused to the investigating agency. In criminal investigations, the use of lie detectors, or polygraphs, raises significant concerns regarding constitutional rights. The anxiety and pressure associated with the testing can lead to involuntary self-incrimination. Even innocent individuals, when subjected to the stress of a lie detector test, may exhibit physiological responses that could be misinterpreted as signs of deception. This situation creates an absurdity where the innocent might inadvertently provide evidence that could be used against them, violating the protections enshrined in Article 20(3). Moreover, the procedure of questioning throughout a polygraph examination comprises relevant and controlled questions that can blur the lines between voluntary and involuntary self-incrimination. These may ultimately lead the examinee to give any self-incriminatory statement without his consent or his will. As such, reliance on polygraph results can create an atmosphere of distrust and coercion, undermining the principle of voluntary consent in legal proceedings.

## VII. PERCEPTIONS OF LAW ENFORCEMENT AND LEGAL PRACTITIONERS

1. A Judge currently posted at the ADJ Fast-track Court, Krishnagar, West Bengal, stated that the Polygraph Test plays a part in the investigation of information extraction; however, it holds no significance in the trial. The primary reason for this is, firstly, a polygraph test or narco-analysis examination is against Article 20(3) of the Indian Constitution, i.e., the right against self-incrimination. No individual can be forced to testify against themselves. Even

[15] *The Constitution of India* art. 20, cl. 3.
[16] *Supra* note 10.

 [ISSN 2581-5369]

when an accused waives his rights voluntarily by testifying to their guilt by recording his statement under Section 164(1) of the Cr. PC. The Judicial Magistrate does not automatically rely on their testimony but instead makes them understand the consequences of such testimony and allows a minimum of 48 hours for reflection. Even after the expiration of such time, if the accused doesn't change his mind, his statement is recorded. However, he has never seen anyone who has not retracted from his statement, even after reflection. Even then, the recorded statement has a relatively low evidentiary value. Even if a person pleads guilty while framing the charge, the magistrate can continue the trial if the magistrate feels that the accused is not pleading guilty voluntarily, but rather under coercion or force. Secondly, unlike the DNA test, the Polygraph test is not an exact science. Its accuracy ranges from 80-90%, and its accuracy depends upon several external factors, such as the composure of the accused, the surroundings where the test is being conducted, and the question patterns. Also, it is pertinent to mention that a person can absolutely not be in possession of all his senses. As such, any error can severely damage an innocent person. Thus, for all these reasons, the Polygraph holds no evidentiary value in a court of law. It, at best, can only be used as a mode of investigation.

2. According to a Senior Advocate at Port Blair Court, a polygraph is only a corroborative piece of evidence and not a substantial piece of evidence like that of an eyewitness. In a polygraph, the accused person is asked several questions to find out the truth or to check whether the investigation is going in the right direction. However, in recent times, people are well acquainted with the lie detector test, and expert liars can easily pass the test. On the other hand, a person is innocent; however, if he becomes nervous, the test might show that he is guilty of the crime. In other words, the polygraph result is not 100% accurate. In the current criminal law, i.e., BNSS, in cases where the wrongdoing is punishable with imprisonment of less than ten years, the investigation agency shall file the closing report under Section 193 of BNSS within a time period of 60 days. In cases where the crime is punishable with imprisonment for more than ten years, life imprisonment, or the death penalty, the investigating agency must file its report within a time period of 90 days from the day the FIR is filed. In such a case, time plays an essential role. In this, a lie detector plays a crucial role as it can help the investigating authority to complete the investigation in the given period. Investigating Officers are also normal human beings and not magicians; as such, they too require certain aids in the investigation process, and this is where a lie detector comes into play. The polygraph test is thus used only to procure further evidence.

 [ISSN 2581-5369]

## VIII. CONCLUSION

There remains a debate about whether polygraphs can be used as substantive pieces of evidence. Polygraphs can be useful if done correctly, but their application also remains limited. While polygraphs can offer insights into psychological states and physiological responses, their reliability and accuracy are heavily debated among experts. Polygraphs, if conducted properly, can reveal hidden information that otherwise may not be discovered by a general investigation. Nevertheless, any error from either side can be very detrimental to the whole investigation. The Indian Legal System is very careful regarding the admissibility of any evidence before a court of law. While polygraphs can be an additional tool in investigations, their utility as conclusive evidence in legal proceedings remains practically zero.

*****

 [ISSN 2581-5369]