# **Polygraph Test and Its Relevancy in Criminal Justice System**

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#### Abstract

Law is dynamic and not static and therefore, as society evolves law has to keep in consonance with the changing social order. Law is the instrument of societal change and the judiciary has the responsibility of interpreting the law for the greater good. Therefore, it is clear that the judicial mind must stay in touch and keep in step with the advancement of humanity. To combat organized crime, its detection, investigation and prevention method have to be employed synchronously. If the criminal use new technology in committing the crimes, the enforcement agencies need to use the new techniques in solving such crime. If the enforcement agencies do not use these technologies for solving such complicated crimes, it would be very difficult to detect the perpetrators of such crime. Therefore in the context of the changing organized modern criminal who are taking shelters behind and making full use of the new sophisticated technologies. Krishna Iyyer J. remarked "the courts self-criminate themselves if they keep the gates partly open forculprit to flee the justice under the guise of interpretative enlargement of golden rule of criminal jurisprudence". In present paper the efforts have been made by the authors to disclose the relevancy of polygraph test in criminal justice system.

### I. Introduction

For as long as human being have deceived one another, people have tried to enlarge techniques for detecting dishonesty and finding truth. In early society it was believed that that goodness could be differentiated from evil easily because it was believed that goodness was stronger, or that divine intervention would protect the truth speaker. Tests were devise based on the assumption that a magical force would come into play to identify or rescue the truth speaker. To find out the truth was known as corsnaed. It was used by Roman Catholic priest during the inquisition to detect the guilt of the member of the priesthood.<sup>1</sup>

In India same notion of divine intervention prevailed in the ordeal to find out the truth. In 1886 A'liIbra'hi'mkha'n describes nine ways in which the ordeal may be conducted. They included the balance, fire, water, poison, rice, boiling oil, red hot iron, and image.<sup>2</sup> Such technique to find out the truth is known as lie detector or polygraph test.

Lie Detection took on aspect of modern science with the development in the 20<sup>th</sup> century of the techniques proposed for the psycho psychological deception, most outstandingly Polygraph testing. The Polygraph testing or instrumental measures several psychological method (ex. Heart rate) and changes in these process. From the chart of those measures in response to question on a Polygraph test, sometime aided by observations during the Polygraph test examiners infer a psychological state, namely, whether a person is telling the truth or lying. Nevertheless in India this technique is not so trustworthy. In India the present day scenario of crime investigation and prosecution of criminals is sad sight.

Modern Polygraph recording has become computerized. This consists of a computer, a combination unit that provides for magnification of the physiological signals and their conversion to digital form, and a printer. Lie detectors are called Polygraph because the test consists of at the same time a monitoring several of the suspects psychological functions breathing, pulse, and galvanic skin response and printing out the result on graph paper. The print out shows exactly when, during the questioning period, the biologic responses occurred .If the period of maximum biologic reaction lines up with the solution question on the graph paper the question that would associate the person as being involved with the crime stress is assumed .And along with this assumption of stress comes a second assumption: that the stress indicate a lie.

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Polygraph test is the process which is used in medical practice for comprehensive study of functioning of different body systems with particular reference to circulation, respiration and peripheral nervous response. This technology has been attempted in forensic investigation process. The basis of its application is the fact that mental excitation or stimulation there is alteration of these body functions due to autonomic, particularly sympathetic excitation.<sup>3</sup>

The successful trial and conviction in the criminal cases depend very much on the proper investigation and collection of evidence by the investigating agencies against the suspect. In complicated criminal cases psychological test can be used by investigators to cross check their finding determine if a suspect is telling the truth or make him reveal facts pertaining a care. A lot of criminal cases have been solved through this technique.

At modern time the criminal are taking in to consideration new techniques in commission of the crime due to technological developments. Therefore, there is dire need that the prosecution agency rely on something more reliable, more actual and more creative in terms of convictions without the police having to resort to the third degree method that not only violates fundamental human rights but also fail to produce positive result results most of the time. Recent times have witnessed an epidemic in the use of contemporary scientific technique such as the Lie Detector, or polygraph test for use in criminal investigation.

The Courts in India have taken into account an incomplete consideration of the law, which is the reason for their conclusion in favor of the tests. While the tests may be a realistic requirement, the sanction of the law for some of them is difficult to find, and extensive safeguards need to be laid out to avoid their exploitation. It is now upon the Supreme Court to define the limits of such tests in context of the rights affected, or vice-versa.

#### **Procedure of conducting Polygraph test**

Polygraph test is conducted is commonly known as Lie Detector test. In this test examination conducted by the probe attached to the body of the person who is interrogated by the expert.<sup>4</sup>. The person is made to sit on a chair and the accessories of the instrument are properly attached on different parts of the body. An arm cuff is placed around the arm for recording blood pressure and pulse rate and pulse features. An elastic belt is placed around the chest to measure the rate and amplitude of respiration with deviations and an electrode connection is placed, one on the tip of one side index finger for recording galvanic skin reaction (Galvanic current is used for the purpose). The response is recorded graphically on a single paper from where different adverse responses, the intensity of responses, and the time and extent of exciting reaction, can be studied.<sup>5</sup>

In the following table shows that the name of the instruments attached to the different parts of the body for the purpose of various graphical measurements. The variation in the pulse rate, the heart rate, the skin conductance, the blood pressure etc. are measured before conducting the Polygraph test, there are some steps which the examiner has to prepare the subject and himself are to be followed -

- Go through the background of the case.
- Formatting questionnaire based on the background of the case.

• Apprise the subject on the objective of the test, the nature of the instrument, its various attachment and recording.<sup>6</sup>

During the test the heart beat increase; blood pressure goes up, breathing and so on and so forth. In the very beginning a baseline for the psychological characteristic is established by asking whose answer the investigator known. Deviation from this pre-determined base line for truthfulness, measure by the Lie Detector, is taken as a sign of life .This test does not involve any direct invasion of the body. The basically produces a graph of multiple psychological parameters and hence the name Polygraph .In this test, the Polygraph taken gives a reading of the deviation of the psychological parameter from the base line for truthfulness, which is determined by the natural question asked it the very beginning. The graph that id produced after the interrogation with target question, aimed to make a possible liar uneasy in his psychological reaction is examined by an expert who would then explain their reaction, in the court and also to the law enforcement officer to aid them in their investigation .His conclusion, which would flow from his reading of the Polygraph, may be admitted or rejected by a judge on appreciation of the statements and the objection raised thereto by the defense and other expert .In case of a Polygraph, the subject may or may not answer the question his psychological reaction arises.<sup>7</sup> During the Polygraph test an expert and skilled examiner will make assessment of the following procedure –

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- a) As assessment of examiner's emotional state;
- b) Medical fitness of the examinee;
- c) To identify overly responsive behaviour specialised tests be conducted;
- d) To asses overly responsive behaviour specialised test be conducted ;
- e) To do factual analysis of case information and
- f) To do pre-test interview and detail review of question.<sup>8</sup>

In Polygraph three aspect of human physiology are tested viz

(a)Pneumograph tracing

(b)Electro dermal activity tracing, and

(c)Cardio vascular tracing.

The first relate to respiration, the second to skin conductor or skin resistance and the third with blood volume and pulse rate.<sup>9</sup>

#### Scientific validity of Polygraph Test:

Advance in science and technology unlikely to leave our untouched, and the Polygraph is no exception. The Polygraph is a scientific instrument which used for research in to bodily responses and their relationship with psychological process. As an instrument, it reliable in producing a record of bodily event.<sup>10</sup>The "Validity of Polygraph testing" means its ratio of accuracy regarding detection of deception and truthfulness. Polygraph test take a number of form and it validity can be measured in a number of ways.<sup>11</sup> The validity of Polygraph test is based on the assumption that the test consistently measures the same properties. This consistency is its reliability and it is the degree to which the test can be repeated. If on repetition the same result is obtained then it is reliable. It also means that if the examiner on analysis of chart comes to a conclusion, the same conclusion on the basis of same chart analysis should be drawn by another examiner. It means that the test should be reviewable. Polygraph test is meant for lie detection; therefore, it is necessary that the test should adequately measure the underlying trait it designs to assess. It is called "construct validity". At present there are different Polygraph based on different theories. This makes it difficult to established construct validity. <sup>12</sup> At present time the significance of Polygraph test is going up with passing of the time. Because by the help of this technique it is possible to detect the truth. The test is being conduct without any third degree method. In this technique the question is put up from the accused person and the accused person has given answer of the question only in yes or no. A Polygraph of the person subjected to test is taken and expert analyse the Polygraph and gives his/her opinion in the court. Now the court has to decide about the admissibility of the test result.<sup>13</sup>

#### **Constitutional validity of Polygraph test**

The main legal provision which govern the expert evidence (Lie Detector test), are in Indian Constitution, Code of Criminal Procedure, Indian Evidence. In Indian Constitution there are various provisions which are related with the protection of the accused person .In Indian Constitution the provision of life, liberty and freedom has been given under Article 20 and 21. According to Article 20(3) "no person accused of any offence shall be compelled to be a witness against himself'. This article applies only to an accused and only speaks of self-incrimination evidence by way of compulsion. Under this Article only an accused person can avail the protection if he is compelled to be a witness to be a witness against himself.<sup>14</sup>Every civilized society guarantees the right against self-incrimination as a fundamental of fair trial in a criminal offence. According to this principle, a person accused of a criminal offence cannot be forced to incriminate himself or yield evidence against himself. The right against self-incrimination is designed to prevent the use of law or the legal process to force from the lips of the accused the evidence necessary to convict him. Despite the fact that the right as been defined broadly its scope as been confined by judicial interpretations evidence that is testimonial in nature. In other words, it has been held that the protection is available only to evidence which required a volitional act on the part of the accused person thus rendering it testimonial or communicative in nature and it will not protect taking of blood sample, fingerprint etc. from the accused. The protection would be available only from the time the person is charged of an offence it does not extend to the pre-accusation or investigation stage if a strict

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interpretation of Article 20(3) is done. The immunity will not be available to a person against whom no accusation has been made when a compulsory process or notice is notice is issued directing him under pain or penalty to produce a document tough ultimately it may incriminate him for the commission of an offence.<sup>15</sup> The Constitutional embodiment invigorating the ban on self-incriminating has been enshrined in Article 20(3) of the Constitution of India.<sup>16</sup>Article 20(3) provides protection to the accused person in respect of the conviction. In case of *Sidhartha Vashist v. state*<sup>17</sup>it was held by the court that the interrelationship between the 'right against self-incrimination and the 'right to fair trial ' has been recognised in most jurisdiction as well as international human rights instrument. The guarantee of 'presumption of innocence' bears a direct link to 'right against selfincrimination' since compelling the accused person to give evidence would place the burden of proving innocence on the accused instead of requiring the prosecution to prove guilt .thus right to refusal to answer question that may incriminate a person is a procedural safeguard which has gradually evolved in common law and bears a close relation to right to fair trial. When the question arise that that when a person may claim the protection against self-incrimination under Article 20(3) of the Indian Constitution. In the case of State of Bombay v. Kathi kalu Oghad<sup>18</sup>, the court observed that conducting the Polygraph by the police without the consent of accused person is violation of article 20(3) of the Indian Constitution. The right against forced selfincrimination is enshrined in Article 20(3) of the Indian Constitution as well as in the Criminal Procedure Code. In this case the Bombay High Court had to decide whether compelling the accused person to undergo this test would violate their right to silence and compel him to provide evidence against himself. In this case Palshikar j. held that the right against self-incrimination applies only to court proceeding and not to police interrogation.

In case of *M.P. Sharma v. Satish Chandra*<sup>19</sup>, the Supreme Court has measured the principle underlying Article 20 (3) of the Indian Constitution, which says that no person accused of any offence shall be compelled to be a witness against himself. In this case it was contented before the court that that guarantee under Article 20(3) of the Constitution against testimonial compulsion is confined only to oral evidence of a person standing his trial for an offence when he is called to the witness stand. The Supreme Court has said by rejecting this contention that there is no reason to confine the content of the Constitution guarantee to its barely literal import, and therefore, to limit it would be to rob the guarantee of its substantial purpose and to miss the substance for the sound as stated in American decision. After saying this, the Supreme Court has made the following observation:

"To be a witness is nothing more than to furnish evidence and such evidence can be furnished though the lips or by production of a thing or of a document or in other modes".

These observation shows that a person can be a witness and can provide evidence against himself by different varieties of modes. One method would be to appear for medical examination and, thus, to enable the prosecution to some evidence against him.

In *Ram JawayyaKupar's case*<sup>20</sup> it was held by the court that in absence of any law any infringement in fundamental right must be struck down as unConstitutional Lie detection test comes under the general power of investigation (section 160-167, Cr.P.C) But it must be realised that it is a choice of the person to allow himself/herself to be put to Polygraph test or not and it should not be left to the discretion police. Except it is allowed by the law it must be seen as illegal and unconstitutional. But if this test is conducted by the investigating authority, it must be conduct with the free consent of the person. Free consent means that it is chosen and is not given under coercive circumstances for example if a person says that "I wish to take a Lie Detector test because i wish to clear my name" it shows that he want to undergo with Polygraph test but it is still to be shown that whether this voluntariness under coercive circumstances. If a police officer told to a person "take a Lie Detector test and we will let you go", it shows that the police officer has linked up the freedom to go with the Lie Detector test and as such it cannot be held voluntary. These kinds of statement are held to be self-incriminatory.

If a person has committed a heinous crime and he is lying or his act is against the security of Country, such person can not take the benefit of right against the self-incrimination under the Article 20(3) of the Indian Constitution. It means that under such circumstances this test may be conducted by the investigating agency to find out the truth. In case of *NandinisathpathivP.L.Dani*<sup>21</sup>, the (a former Chief Minister of Orissa) has made complaint that she was being prosecuted for her refusal to answer police question about a corruption case lodged

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against her. She that she can not compel to give answer of the question asked by the police officer as she has right against self-incrimination under Article 20(3) of Indian Constitution and she has also protected under section 161(2) of Cr.P.C. In such circumstances it depend upon the nature corruption if the lady has committed simple mistake or not a heavy corruption then its ok otherwise she may compel to undergo the Lie Detector test. There must be Article 20(3) but there is loss in using Lie Detector test depending upon the gravity of facts of the cases.

In *Ramchandra Reddy v. State of Maharashtra*<sup>22</sup>, It was held by the court that "The Lie Detector test is an examination which is conducted by various probe attached to the body of the person who is interrogated by the Expert. In this test the heart rate, the skin conductance is measured. The underlying theory of this test is that when people lie they become nervous. The heart beat increases, blood pressure goes up, breathing rhythm changes, perspiration increases, etc. A baseline for this physiological characteristic is established by asking the subject questions whose answers investigators know. Deviation from the baseline for truthfulness is taken as a sign of lie. Consequently, there is no direct incursion of the body. In this test the Polygraph is taken which gives this reaction and an expert would then explain these reactions in the Court which would be his reading of the Polygraph from which would flow this conclusion which are to be admitted or not admitted by a judge on appreciation of the statement and the objections raised thereto. In this case the witness may answers or may not answers the questions. The response of his answers to questions as recorded on the Polygraph analysis of which is required to be tendered as evidence if and when the occasion arises."

In *D.K. Basu* v. *State of West Bengal*<sup>23</sup>, the Honn'ble court has emphasised on the importance of the preventing the cruel, inhuman, degrading treatment while a person is taken into custody. In the present context involuntary and forcibility administration of any of the tree scientific techniques like Narco-Analysis test, Polygraph test and Brain Mapping in a forensic laboratory or in a hospital, physically confining the subject will fulfil the requirement of custodial environment and thus will attract the provision under Article 20(3) and Article 21 of the Constitution .This is applicable not only for the accused ,suspect ,witness but also for investigation who questioned in the of investigation without being brought in the record as witness. It is clear that each of the tree scientific techniques causes the subject to lose his control over his responses. It is clear from the language of the Article 20(3) and Article 21 of the Constitution that the involuntary administration of the above three scientific techniques will amount to cruel, inhuman and degrading treatment in the context of Article 21.<sup>24</sup>

In the case of *Jitubhai Patel v. State of Gujarat*<sup>25</sup>, since the state had filed affidavit that it shall not conduct the test on the accused person without his consent the issue of admissibility of scientific evidence becomes academic only. It may be decided at some different occasions. In this case it was held that scientific tests such as Polygraph test, Narco-Analysis test can be conduct without taking the consent of the accused person. it should be kept in the mind that there has been great scientific advances and there is subtle difference between old test methods of blood testing or fingerprinting and Polygraph and Narco-analysis test. Old tests were of the nature of physical tests, but the new scientific tests are something more than physical tests. A general opinion is being formed that these tests should be applied not only to ordinary criminal but even to VVIPs. If these scientific methods are not encouraged then use of third degree methods would be encouraged tests.

The principle of protection from self-incriminating evidence is founded on the presumption of innocence; the maxim "*Nemoteneturseipsumprodere*" which means no one is bound is bound to accuse himself.<sup>26</sup>As far as the Indian law regarding this is concerned the protection against self-incrimination continues to be more or less same as in the English common law.<sup>27</sup> The protection has been given to the accused person accused from self-incrimination In Article 20(3) of the Indian Constitution and section 161(2) of Code of Criminal Procedure. It has been given under Article 20(3) and section 161(2) code of criminal procedure that, "No person accused of an offence shall be compelled to be a witness against himself" and "Such person shall be bound to answer truly all questions relating to such case put to him by such officer, other than questions the answers to which would have a tendency to expose him to a criminal charge or to a penalty or forfeiture" respectively. In the Polygraph test no force is used. The underlying principle of the Article is presumption of innocence of the accused person in every criminal prosecution, where the burden of proving the guilt lies on the prosecution. According to this principle, it is the duty of prosecution to discover facts and produce evidence to

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prove the guilt before the court .The natural inference would e that extracting information of facts from the accused person through Lie Detector devices would clearly come under and hit the principle of self-incrimination, provided under Article 20(3).

The idea behind the protection against self incrimination is to support a free situation in which the accused can be certain to furnish evidence in courts and be of significant aid in elucidating truth in a case, with reference to material within their awareness and in their possession.<sup>28</sup> Anything caused, by any kind of threat or inducement by a person directed towards the accused or likely to be accused of any offence, which causes him to act involuntarily and further the case against himself in any prosecution against him or which results or is likely to result in the incrimination of that person qua any offence, is violative of the fundamental right guaranteed under clause (3) of Article 20 of the Constitution of India.<sup>29</sup> Involuntary is defined as an admission, especially by an individual who has been accused of a crime that is not freely offered but rather is precipitated by a threat, fear, torture, or a promise.<sup>30</sup>

The phrase compelled testimony is read as evidence procured not merely by physical threats or violence but by psychic torture, atmospheric pressure, environmental coercion, tiring interrogative prolixity, overbearing and intimidatory methods and the like.<sup>31</sup>The purpose of lie detection is to elicit the truth from the suspects devoid of any physical coercion.

Protection against self incrimination was instrument for the protection of the innocent and not intended for the acquittal of the guilty.<sup>32</sup> The framers of the Bill of Rights believed the rights of society were supreme to the rights of the criminal.

In case of *Selvi v. State of Karnataka*<sup>33</sup>, there was question before the court relating with the relevancy of Polygraph test. In this case the court has to decided that whether conducting the Polygraph test on the subject without his/her consent is constitutionally valid or not. The court held that Article 20(3) protects an individual choice between speaking and remaining silent, irrespective of whether the subsequent testimony proves to be inculpatory or exculpatory. The main object of Article 20(3) is to prevent the forcible 'conveyance of personal knowledge that is relevant to the facts in issue'. The result obtained from each of the impugned test bear a 'testimonial' character and they cannot be categorised as material evidence. In this case the Supreme Court has laid down some guidelines regarding Polygraph test also. Supreme Court further held that polygraph test should not be conduct on the accused person without taking his/her consent. If such test conducts without taking the consent of the accused person, it would be violation of Article 20(3) of Indian Constitution.

In*Najeebcase*<sup>34</sup>, the court had on March 15 reserved its order after the counsel appearing for the students submitted that the "lie detector test is unconstitutional and illegal unless it is voluntary."

#### **Evidentiary Value of Polygraph Test**

Section 3 of the Indian Evidence Act defines evidence as "Evidence" means and includes

(1) All statement which the court permits or requires to be made before it by witnesses, in relation matter of fact under inquiry;

(2) All document including electronic records produced for the inspection of the court;

Such documents are called documentary evidence.<sup>35</sup>

According to above mentioned definition of 'Evidence' answers recorded during Narcoanlysis or Polygraph tests cannot permit them to be admitted as they do not fulfil required conditions, Factors and provisions of law. Court may, according to the given definition 'permit' a statement which at the most may be called as evidence but that would not render it to become admissible automatically. The court may either admit the permitted statement or reject it on definite consideration, principles and rules of law, as its admissibility depends on number of factor.<sup>36</sup>

The statement recorded of the person put under Lie Detector test hit the principle and rule of voluntariness, because they are either recorded in the state of semi-consciousness or information are extracted through so called scientific equipment and methodologies which scientist themselves question for reliability.

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Cardinal rule of evidence and criminal jurisprudence as well, is that the person making the statement must be in a fit state of mind.<sup>37</sup>

#### Confession and Polygraph test under Indian Evidence Act, 1872

The main object of putting a suspect /accused to Polygraph test is to take out or at least to know how far she or he has awareness or information about the crime under enquiry and also to extract acknowledgement of guilt of the person.

Some people contend and try to widen the scope of confession to include oral and written statement in reference to Polygraph test etc., which in their view amount to confession. The contention is based on false notion and contradicts clear provision of law.

#### II. Conclusion

By and large, lie-detector evidence has limited judicial recognition. In a few courts Polygraph test results have been recognized for their value as an aid to investigation and in some cases the expert evidence relating to Polygraph has been accepted. The experts in areas like fingerprints, firearms, identification questioned documents etc. have been widely acclaimed. But the Polygraph experts have not received acceptance and recognition from the court. It is unfortunate because the Polygraphists have established 95 to 98% accuracy of the Lie Detector in detecting deception or the truthfulness of the subjects in criminal investigations. On the basis of relevant scientific data on Lie Detector, it is strongly felt that the courts should accept deception test because it can furnish a fairly effective method and technique for the exposure of deception in a subject. Since Polygraph interrogation is the best available method to detect deception, the time has come for the courts to admit this type of evidence.

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