Chapter VI

Polygraph Test and its Legal Implication in the Indian Criminal Justice System
6.1 Introduction

*When we lie, our blood pressure goes up, our heart beats faster, we breathe more quickly (and our breathing slows once the lie has been told), and changes take place in our skin moisture. A Polygraph charts these reactions with pens on a moving strip of paper.... The result is jagged lines that don’t convey a lot to you. But...an examiner can tell from those mechanical scribbles whether or not you’ve spoken the truth.*

**Polygrapher Chris Gugas**

Not every lie involves emotion, but those may cause special problem for the liar. When emotion occur ,physiological changes happen automatically without choice or deliberation .The literature  indicate that a person who is lying tends to have a higher pitched voice than truth-teller because of stress .This allows a thorough analysis of the truth about lie-detector .

The society owes a commitment to the people that the potential and strength of the states is not abused in the dispensation of justice and that the concept of human right is upheld and nurtured all the time. To preserve the common rights, the basic tool human being has devised is the police set-up. Death, rape and torture in police custody are common, Factual reports have embarrassed several State Government and their police personale which employed third degree methods in the interrogation of the suspected people detained to disclose the truth or their plans. The third degree method will never put an end to the crime as the criminal get hardened and wish to take revenge and cause embarrassment to the establishment. Interrogation of the suspected criminals using third degree methods often results into loss of fear and respect for the authority of the State. The law enforcement agency in the country will have to react effectively by scientific interrogation of the victim and the accused and try to get as much evidence as possible to establish the charge. This is to be done by resorting to forensic polygraphy technique. Forensic Polygraphy is the technique to check deception of truth by a subject juxtaposed with the veracity of his statement.

---

The successful examination and conviction in the criminal cases depends very much on the proper inquiry and the cogent of evidence by the investigating agencies against the suspect. In difficult criminal cases, emotional tests can be exercised by the investigators to cross check their verdicts to conclude whether a suspect is telling the truth or make him disclose facts pertaining a care. A lot of criminal cases have been solved through this technique.

Forensic science in the criminal investigation and trial is mainly concerned with the materials and indirectly through materials with men, places, and time. Among men, the investigation officer is the most important person. In fact, it is he whose work determines the success or failure of the application of forensic science in the processing of a criminal case. For as long as human beings have deceived one another, people have tried to enlarge techniques for the detecting the dishonesty and finding real truth. In today’s World, the scenario of impartiality, the conventional sources of proof, eyewitness description, confession have gone much twisted. The trial procedure is very long so it is difficult to keep the witness from turning hostile. At present the criminal are taking in to consideration new techniques in the commission of the crime. So there is a dire need that the prosecution agency rely on something more authentic, more actual and more creative in terms of convictions without the police having to resort to the third degree traditional method that not only violates fundamental human rights but also fail to produce the positive result results most of the time. Recent times have witnessed an epidemic in the use of contemporary scientific techniques such as the Lie Detector, Brain Mapping, and Narco-Analysis, in the criminal investigation. Although the legal and decent modesty of their use has been in doubt, they may in fact be a solution to many complicated investigation. There has to be something that is available; objective, and hence not prove to the whims of the witness. The answer is provided as science as by the scientific evidence (lie-detector test) is more or less exact far more reliability and does not turn hostile under threats. Lie Detection took an aspect of modern science with the development in the 20th century of the techniques proposed for the psycho psychological deception, most outstandingly Polygraph testing.

3 “Polygraph Test And its Validity in India”, available at www.indiakanoon.com(visited on date 11-03-2013).
The Polygraph testing or instrumental measures several psychological method (ex. Heart rate) changes in these process. From the chart of those measures in the response to the question on a Polygraph test and sometimes aided by observations during the Polygraph test examiners infer a psychological state, namely, whether a person is telling the truth or is he lying. Nevertheless in India, this technique is not so trustworthy. In India the present day scenario of crime investigation and prosecution of criminals is a sad sight. The scientific basis on which the Polygraph works is that the consciously held feelings of guilt produce a defensive reaction in the form of psychological changes in the blood pressure, pulse rate, respiration rate and in the electrical resistance of the skin known as GSR. Usually the fear of detection and entrapment induces a person to lie. This psychological phenomenon results in the mental excitation. Psychologically, the attempt made by the individual to conceal the excitation, is known as the ‘defense mechanism’, which stimulates the adrenal glands, which in response secrete the adrenaline hormone. This hormone, on entering the blood stream, simultaneously increases the blood pressure, pulse-rate and respiration of the individual.4

The Courts in India have taken into account an incomplete consideration of the law, which is the reason for their conclusion in favour 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 the context of the rights affected or vice-versa.

6.2 Meaning and Definition of Polygraph Test

The term Polygraph refers to a process in which selected physiological activities are recorded. According to the definition of Webster’s legal dictionary “a Polygraph is a device for measuring certain involuntary bodily responses, such as blood pressure and perspiration, from which an opinion is drawn as to whether or not the person being tested is telling the truth. Also called, to some extent positively, a Lie Detector. The problem with it is that it may yield accurate opinions in many cases, it may make nervous or confused truth-tellers, and there is no way to know exactly which results are accurate and which are not. Accordingly, Polygraph results are often excluded from the evidence under most circumstances in most jurisdictions and federal laws prohibits employers, from using the device on employees and applicant for employment”.

According to Wikipedia, the free encyclopedia available on the net, Polygraph is derived from Greek words ‘poly’/ ‘many’ and ‘refrain/ to write’

In the US Federal agencies, a Polygraph test is also referred to as a “Psychological Detection of Deception” or PDD examination.

There is no Indian legislation which defines Polygraph , but United States Employees Protection Act of 1988 defines the term ‘Polygraph’ which means an instrument which-

(a) Records continuously visually, permanently and simultaneously as minimum instrumentation tendered; and

---

5 Webster’s legal Dictionary, by Lames E. Clapp, 197.
Chapter VI

(b) Is used, or the result of which are used, for the purposes of rendering a diagnostic opinion regarding the honesty or dishonesty of an individual.

On the other hand, usually in India the suspects who are being taken by police or other security agencies to the forensic labs for detection of lies and deception, and where it is said that such person is being taken for Narco-Analysis test, generally also put to Polygraph test, but it is not the strict rule. The Polygraph test is so old that it had diminished the credibility in the minds of general public, therefore the police in the West seldom publicly say that the culprit is being taken for polygraph test (rather they say and mention Narco-Analysis test in India).  

The most significant requirement of a yogin is Speaking truth. Truth is the emperor of intrinsic worth. Truth is the ultimate asset. The essence of the Vedas is Truth. Have power over passions constitutes the real meaning of truth. Truth is virtue. Virtue is light, and light is pleasure. Ahimsa, brahmacharya, transparency, fairness, harmony, pardon, peace are forms of truth. Impartiality, self-discipline, humility, patience, decency, repudiation, deliberation, self-respect, strength, sympathy, and refraining from harm are the various forms of truth. All the above virtues, although apparently dissimilar, have but one and the same form, namely, truth. All these hold up truth and strengthen it. When the path of truth is crushed, the entire additionally also is done. When the root is watered, all the branches are automatically watered.

Lie Detector or Polygraph tests, in additional terms are rarely used in criminal trials. The theory underlying a Lie Detector test is that lying is distressing and that this distress can be calculated and they record on Polygraph machine. The Polygraph is a pneumatically operated device, which concurrently records changes in a subject’s blood pressure, pulse, respiration rate and depth, psychogalvanic skin reflex (skin resistance to electrical current) and in some cases the muscular activity. When a subject is put to the ‘Polygraph’ test (Lie-detector test) the machine reflects and records only the subjects’ physiological responses to the questions asked by the operator who then interprets the Polygraph and determines whether the subject is lying or otherwise. The instrument in fact, records the sign of internal stress accompanying deception.

---

7  Polygraph test and its reliability available at www.ijars.in (visited on date 22-04-2014).
8  Procedure of conducting Polygraph test available at home.total.net (visited on date 27-07-2014).
Measurement of Blood Pressure etc

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 the digital form, and a printer. Lie Detectors are called Polygraph because the test consists of, at the same time, monitoring several 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.

Conducting the Polygraph Test on the Suspect

9 Ibid.
10 Id.
The Polygraph is a machine that at the same time gauge and chosen psychological behavior or electro psychological behavior. The test is frequently referred to as ‘Lie Detector’ examination although there is no scientific evidence to verify that machine or test can detect lie or deception. The Polygraph mechanism is used and in gathering psychological data by measuring three method in the corpse or the psychological indicators of excitement. The system or indicator is the rate and depth of respiration at the same time as measured by pneumograph that are in serious situation in the region of the trunk and the stomach. Secondly, cardiovascular activity is measured by a blood pressure cuff. Thirdly, the test of perspiration is being detected by way of electrodes that are attached to the fingertips.\(^{11}\)

6.3 Brief History of the Polygraph Test

The origin of Polygraph test has been traced back to the efforts of Lombroso, a criminologist who experimented with a machine that measured blood pressure and pulse rate to assure the honesty of the person suspected of criminal conduct.\(^{12}\)

Since the dawn of civilization, mankind has sought ways to distinguish truthfulness from lying in those individuals who are suspected of criminal wrongdoing. Various inventive techniques for the verification of truth and the detection of deception have been tried over the centuries, many of these being ridiculous and cruel. Despite their crudeness, each technique was based on the assumption that some form of physiological reaction occurred within a person when confronted with certain stimuli regarding a specific event under investigation, and that


this physiological reaction would, in turn, be manifested in certain recognizable external symptoms that were indicative of honesty or deception.\textsuperscript{13}

Polygraphy i.e. the science of truth verification based upon psycho physiological analogues is barely 100 years old. In 1730, British novelist Daniel Defoe wrote an essay entitled "An Effectual Scheme for the Immediate Preventing of Street Robberies and suppressing all Other Disorders of the Night," wherein he recommended that taking the pulse of a suspicious fellow was a practical, effective and humane method for distinguishing truthfulness from lying. Defoe's was an early and insightful suggestion to employ medical science in the fight against crime.\textsuperscript{14}

In 1878, Science first came to the aid of the truth seeker through the research of Italian physiologist Angelo Mosso. It was then that Mosso used an instrument called a plethysmograph in his research on emotion and fear in subjects undergoing questioning and he studied the effects of these variables on their cardiovascular and respiratory activity. Mosso studied blood circulation and breathing patterns and how they changed under certain stimuli. The use of the plethysmograph revealed periodic undulations or waves in a subject's blood pressure caused by the respiratory cycle in response to certain stimuli. Angelo Mosso was the first scientist to report on experiments in which he observed that a person's breathing pattern changed under certain stimuli, and that this change, in turn, caused variations in their blood pressure and pulse rate.\textsuperscript{15}

Although not for the purpose of detecting deception, Sir James Mackenzie, M.D., constructed the clinical Polygraph in 1892, an instrument to be used for medical examinations with the capability to simultaneously record undulated line tracings of the vascular pulses (radial, venous and arterial), by way of a stylus onto a revolving drum of smoked paper.\textsuperscript{16}

Until the end of the 19\textsuperscript{th} century, no measuring device for the detection of deception had ever been used. The first use of a scientific instrument designed to measure physiological responses for this purpose came in 1895 when Italian physician, psychiatrist and pioneer criminologist Cesare Lombroso modified an

\textsuperscript{14} Ibid.
\textsuperscript{15} Ibid.
\textsuperscript{16} Ibid.
existing instrument called a hydroshygmograph and used this modified device in his experiments to measure the physiological changes that occurred in a crime suspect's blood pressure and pulse rate during a police interrogation.

Notably, Lombroso's early device for measuring pulse rate and blood pressure is similar to the cardiosphygmograph component of the contemporary Polygraph. Although Cesare Lombroso did not invent the hydroshygmograph, he is accorded the distinction of being the first person to have used the instrument successfully as a means for determining truthfulness from deception in crime suspects. On several occasions, he used the hydroshygmograph in actual cases to assist the police in the identification of criminals.17

In 1906, Sir James Mackenzie refined his clinical Polygraph of 1892 when he devised the clinical ink Polygraph with the help of Lancashire watchmaker, Sebastian Shaw. This instrument used a clockwork mechanism for the paper-rolling and time-marker movements and it produced ink recordings of physiological functions that were easier to acquire and to interpret. Interestingly, it has been written that the modern Polygraph is really a modification of Dr. Mackenzie's clinical ink Polygraph.18

In 1914, Italian psychologist Vittorio Benussi discovered a method for calculating the quotient of the inhalation to exhalation time as a means of verifying the truth and detecting deception in a subject. Using a Pneumograph, a device that recorded a subject's breathing patterns, Benussi conducted experiments regarding the respiratory symptoms of lying. He concluded that lying caused an emotional change within a subject that resulted in detectible respiratory changes that were indicative of deception.19

Dr. William Moulton Marston, an American attorney and psychologist, is credited with inventing an early form of the Lie Detector when, in 1915, he developed the discontinuous systolic blood pressure test which would later become one component of the modern Polygraph. Dr. Marston's technique used a standard blood pressure cuff and a stethoscope to take intermittent systolic blood pressure readings of a suspect during questioning for the purpose of detecting deception.20

17 Id.
18 Ibid.
19 Ibid.
20 Ibid.
In 1921, John A. Larson, a Canadian psychologist employed by the Berkeley Police Department, in California, developed what many consider to be the original Lie Detector when he added the item of respiration rate to that of blood pressure. He named his instrument the Polygraph — a word derived from the Greek language meaning many writings — since it could read several physiological responses at the same time and document these responses on a revolving drum of smoked paper. Using his Polygraph, John A. Larson was the first person to continually and simultaneously measure changes in a subject's pulse rate, blood pressure and respiratory rate during an interrogation. His Polygraph was used extensively, and with much success, in criminal investigations.\(^{21}\)

In 1925, Leonarde Keeler, who had gained firsthand experience in Polygraph interrogations as a result of working with John A. Larson at the Berkeley Police Department, worked to devise a Polygraph that used inked pens for recording the relative changes in a subject's blood pressure, pulse rate and respiratory patterns, thus eliminating the need for smoking the paper and then preserving it with shellac. In 1926, the Keeler Polygraph came on the market as the new and improved Lie Detector, an enhanced version of John A. Larson's Polygraph.\(^{22}\)

In 1938, Leonarde Keeler further refined the Polygraph when he added a third physiological measuring component for the detection of deception- the psychogalvanometer - a component that measured changes in a subject's galvanic skin resistance during questioning, and in doing so, thus signaling the birth of the Polygraph as we know it today.\(^{23}\)

In 1939, Leonarde Keeler patented what is now understood as the prototype of the modern Polygraph - the Keeler Polygraph. Today, Leonarde Keeler is known as the father of Polygraph.

In 1947, John E. Reid, a lawyer from Chicago, Illinois, developed the Control Question Technique (CQT), a Polygraph technique that incorporated control questions (comparison) which were designed to be emotionally arousing for non-deceptive subjects and less emotionally arousing for deceptive subjects than the relevant questions previously used. The Control Question Technique (CQT) replaced the

\(^{21}\) Id.
\(^{22}\) Ibid.
\(^{23}\) Ibid.
Relevant/Irrelevant Question Technique (RIT) which used relevant or irrelevant questions during a Polygraph examination. The Reid Control Question Technique was a major breakthrough in Polygraph methodology.\textsuperscript{24}

In 1948, Leonarde Keeler founded the world's first Polygraph school, the Keeler Polygraph Institute in Chicago, Illinois. In 1958, Cleve Backster, an ex-Polygraph examiner with the CIA, introduced a quantification system of chart analysis, thus making it more objective and reliable. This system for the numerical evaluation of the physiological data collected from the Polygraph charts has been adopted as standard procedure in the Polygraph field today.\textsuperscript{25}

In 1960, Cleve Backster, building upon the Reid Control Question Technique, developed the Backster Zone Comparison Technique (ZCT), a Polygraph technique which primarily involved an alteration of the Reid question sequencing.

Cleve Backster also introduced a quantification system of chart analysis, thus making it more objective and scientific than before. This system for the numerical evaluation of the physiological data collected from the Polygraph charts has been adopted as standard procedure in the Polygraph field today.\textsuperscript{26}

Since 1962, the study of the use of computers in the physiological detection of deception has progressed through several phases.

In the late 1970s, Dr. Joseph F. Kubis, of Fordham University in New York City, was the first researcher to use potential computer applications for the purpose of Polygraph chart analysis.\textsuperscript{27}

During the 1980s, research was conducted on computerized Polygraph at the University of Utah by Drs. John C. Kircher and David C. Raskin and, in 1988; they developed the Computer Assisted Polygraph System (CAPS), which incorporated the first algorithm to be used for evaluating physiological data collected for diagnostic purposes.

In 1992, the Polygraph made its official entrance into the computer age. In 1993, statisticians Dr. Dale E. Olsen and John C. Harris at Johns Hopkins University, Applied Physics Laboratory, in Maryland, completed a software program called

\textsuperscript{24} Ibid.
\textsuperscript{25} Id.
\textsuperscript{26} Ibid.
\textsuperscript{27} Ibid.
PolyScore, which used a sophisticated mathematical algorithm to analyze the Polygraph data and to estimate a probability or degree of deception or truthfulness in a subject.\(^{28}\)

PolyScore 3.0 Polygraph Software was developed by analyzing the data from Polygraph examinations administered in 624 real criminal cases in which 303 suspects were non-deceptive and 321 suspects were deceptive.\(^{29}\)

In 2003, PolyScore 5.1 Polygraph Software was developed by analyzing the data from Polygraph examinations administered in 1,411 real criminal cases provided by the United States Department of Defense Polygraph Institute for study and comparison purposes.

Poly Score is a computerized Polygraph chart scoring algorithm that uses statistical probability to arrive at truthfulness or deception. It has been shown that validated algorithms have exceeded 98 per cent in their accuracy to quantify, analyze and evaluate the physiological data collected from Polygraph examinations administered in real criminal cases.

In 2003, the U.S. Department of Energy commissioned a review committee of The National Academy of Sciences to study the scientific evidence on the Polygraph. In this endeavour, the committee sifted through existing evidence in the Polygraph research literature and did not conduct any new laboratory or field research on Polygraph testing for, as they clearly reported, real-world conditions are difficult — if not impossible — to replicate in a mock-crime setting or a laboratory environment for the purpose of assessing Polygraph effectiveness.\(^{30}\)

The review committee of The National Academy of Sciences concluded that, although there may be alternative techniques to Polygraph testing, none can outperform the Polygraph, nor do any of these yet show promise of supplanting the Polygraph in the near future.

Withstanding more than a century of research, development and widespread use, the Polygraph test remains the most effective means of verifying the truth and detecting deception.\(^{31}\)

\(^{28}\) *Ibid.*  
\(^{29}\) *Ibid.*  
\(^{30}\) *Id.*  
6.4 Timeline History of Polygraph test

In the medieval England, practices like putting a suspect under water or throwing him in the fire were prevalent for lie detection. In 1215, these practices were banned by the law “Edict of the Latern Council”.

During 1600, it became a trend to detect lies by the scientific and logical reasoning and by questioning.

In 1730, Daniel DeFoe was the first person who departs from the theory that “the body’s agony would oblige the lying mind to croak out its secrets” and he suggested the evaluation of heart rate to detect deception.

During 19th century, it was believed that truthfulness and lying relate to morality of persons and this is embedded in the personality of the individual.

In 1804, John Isaac Hawkins first coined the term “Polygraph for his copying machine.

In 1895, Cesare Lombroso, “The Father of Modern Criminology” was the first to attempt to use science to detect deception called “Lombroso’s Glove”, a Hydroshygmograph.

In 1897, B. Sticker developed a method for recording galvanic responses using interrogation.

In 1908, James Mackenzie invented ‘ink Polygraph’ which monitored cardiovascular responses by taking the pulse and blood pressure.

In 1915, an American psychologist William M. Marson used sphygmomanometer for a lie detection test.

In 1921, Dr. John A. Larson, an American psychiatrist, developed an instrument which could be called the earliest version of Polygraph. For the first time he prepared permanent record of blood pressure.

In 1926, Leonardo Keelar improved Larson’s Polygraph by adding to it “galvanic skin response” and gave birth to improved version named “Keelar Polygraph”.

In 1932, A.L. Luria gave the opinion that “when a criminal tries to conceal his guilt he becomes more and more tense and does not remain passive during interrogation.

In 1944, Bell laboratory invented sound spectrograph.

In 1953, Wicker, a Professor of the College of Law, University of Tennessee, wrote that if and when convincing evidence obtained by scientific method are produced to expose falsehoods either in court of law or outside then it should be taken in account.

In 1959, American Polygraph association gave its report and issued guidelines for Polygraph tests.

In 1960, a scientist Lawrence Kersta, while working with spectrograph, claimed that through voice prints individuals can be identified.

In 1963, the United States Supreme Court held that “serum induces confession was unconstitutional and it was tortuous practice”

In 1963, when leaks about confidential matters were reported there was proposal at Government to use Lie Detector to discover the source of such unauthorized disclosures.

In 1964, Justice Radger A. Ptaff of Supreme Court of Los Angeles observed that “An adequate Polygraph in the hands of competent examiner can be an adequate aid in the administration of justice”.

In 1965, the House Committee on Government operation concluded that “there was no scientific evidence to support the theory of Polygraph and its results were inaccurate”.

In 1970, Badroski stated, “The present legal attitude with respect to the Lie Detector reflects a position which has not been materially recast since, 1923”.

In 1971, the Psychological Stress Evaluator (PSE) or voice stress analyzer (VSA) was developed as an alternative to traditional Polygraph.

In 1973, Florida Court also admitted Polygraph evidence.

In 1974, it was found that “use of Polygraph in various agencies of Federal Government decreased substantially”.

In 1974, the House Committee on Government Operation concluded that the “Polygraph has demonstrated little validity and reliability in the detecting deception other than in laboratory situation”.

Since 197, in India, more than 300 Polygraph tests have been conducted at Forensic Science Laboratory (FSL), New Delhi.

In 1980, the computerized voice analyzer (CVSA) was first used by U.S. Soldier to determine whether Vietnamese prisoners were Vietcong guerrillas or civilians.

In 1980, the word “voice print” was trademark and established the International Association of Voice identification which was merged with International Association for identification.

In 1981, Raskin stated “admissibility of Polygraph evidence appears to be in a state flux”.


In 1988, on the basis of various studies the U.S. Congress passed a specific legislation ‘Employees Polygraph protection Act, 1988’ for prohibition use of Polygraph in private market job.\(^{32}\)

### 6.5 Procedure for conducting Polygraph Test

Originally, it is significant to note that there is no one polygraph technique. There are a great many polygraph techniques known by many names, even though they all have certain qualities in general. All polygraph tests involve the measurement of physiological responses (usually, respiration, palmar sweating, and cardiovascular activity) with an instrument while the subject is asked a series of questions. Polygraph tests begin with an interview during which the examiner psychologically prepares the subject for the test. Once collected, the physiological data are usually evaluated by the examiner. Failed law enforcement examinations are often followed by an intense interrogation designed to force the subject to confess to the crime in question. However, substantial differences exist between the various polygraph tests in the

character of the pretest interview, in the structure of the question series, and in the assessment of the physiological data. 33

Polygraph test is conducted is commonly known as ‘Lie Detector’ test. When a person is truthful, he has no tension in his mind. In this stage no psychological change arises, but when a person lies, psychological changes arise. 34 In this test examination conducted by the probe attached to the body of the person, who is interrogated by the expert. 35 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 are to be followed by the examiner –

- 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. 36 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. This 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 it 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 and the response of his answer to the analysis of that is

36 “In Focus Lie Detector” LawZ 10 (2010).
sought to be tendered as evidence if and when the occasion arises. 37 During the Polygraph test an expert and skilled examiner will make assessment of the following procedure –

a) An assessment of examiner’s emotional state;
b) Medical fitness of the examinee;
c) To identify overly responsive behaviour specialised tests be conducted;
d) To assess 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. 38

In Polygraph process three aspects of human physiology are tested i.e.

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. 39

When an individual undertakes a Polygraphic lie detection test, the first phase of this usually involves an interview with the Polygrapher during which some biographical question will be asked or job application the actual nature of the question which will be asked during the lie detection test. It will be asked by the Polygrapher to the individual whether the individual understand every question. Many Polygraphers also use this first phase to obtain an initial impression of the testee and to judge whether the individual seems to be more of an honest, upright citizen than a deceiver. At this time, the Polygrapher will not have been switched on, but now the Polygrapher will explain its basic principle. He or she will connect the individual to the machine and show the testee how it work. 40 The second phase begins when the suspect is asked a series of question to which the reply of either ‘no or ‘yes’ must be given. The Polygraph is switched on and now is out of sight of testee, usually behind him or her. During this phase, the various psychologically activity which may accompany the testee’s answer to the question is displayed and recorded on pen chart.

37 Supra 6, 550.
38 Supra 32, 594.
39 Ibid.594.
by the Polygraph. The basic principle underlying modern Polygraph is that of making a comparison between how a person respond to non-incriminating question and how he or she respond to incriminating question. This comparison does not look for any complex pattern of responding (for example, high heart rate and also low respiration rate when lying, and the reverse when telling the truth, but at magnitude and frequency of psychological activity to various sort of question.

In relevant questioning techniques, several irrelevant questions are framed which have no basing on the case or involvement of the subject in a crime under investigation. The relevant question are interposed in-between irrelevant question, which have a direct bearing on the case, and are likely to draw stressed response from a quality subject. The typical relevant irrelevant test employ a series of 10-15 question comprised of crime relevant questions (e.g., “did you rob Mr. H.C. Gupta”) and irrelevant (neutral) question (e.g., “Are you sitting down”). The rational of the RT predicts that the since a guilty subject will answer the relevant question deceptively, it is expected that the guilty person will exhibit relatively strong physiological reaction to the relevant as compared to the truthfully answered irrelevant question. Conversely, the rational of the RTI predicts that since an innocent subject will answer all questions truthfully, it is expected that there will be little difference in the strength of reaction to the two types of questions.

6.5.1 The Control Question Test (CQT)

Now a days, the control question (CQ) technique is the most commonly used for Polygraph test. Control question tests are the second group of detection of deception tests. Control question tests are the most commonly used polygraph test in law enforcement today. This test consists of control question and relevant question. Control question are interposed among the relevant and irrelevant question. The control questions are irrelevant to the facts being investigated but they are intended to provoke distinct psychological responses, as well as false denials. They do not directly relate to the crime under investigation, but to a similar situation in which his

---

41  Ibid.
42  Id.13.
43  Supra 7, 11.
45  Supra 13, 360.
46  Dr. Subhodh K. Singh ,”Admissibility of Polygraph test in Indian Administration of Criminal Justice System” CriLJ 77,(2012).
answer may have a feeling of concern with respect to either its truthfulness or its accuracy. These responses are compared with the responses triggered by the relevant question. Hypothetically, a truthful subject will show greater psychological responses to the control question which he has reluctantly answered falsely, than to the relevant question, which the subject can easily answer truthfully. On the other hand, a deceptive subject will show greater psychological responses while given false answer to relevant question in comparison to the responses triggered by false answer to control questions. In other words, a guilty subject is more likely to be concerned with lying about the relevant facts as opposed to lying about other facts in general. An innocent subject will have no trouble in truthfully answering the relevant question but will have trouble in giving false answer to control questions.

6.5.2 A Direct Lie Test (DLT) or “stim test”

When a subject is telling the truth, this test tries to detect lying by telling the subject to deliberately lie. The psychological responses are being compared.

6.5.3 The Guilty Knowledge Test (GKT)

This test compares the psychological responses to multi-choice type questions relating to crime under investigation, one choice of which contain information relating only to the crime investigation (and sometimes not) and the real culprit would know about.

6.5.4 Peak of Tension Test (POT)

Peak of tension question is framed when some of the important details of the offence in question are not made known to the subject. The test question are framed in such a way that only one question will have bearing upon the matter under investigation and all others come close to the guilty knowledge. The series of question framed are administered with the instrument attached. During the first reading if the subject has no knowledge or information on the pertinent question put to him then there would be no tension. The honesty behind Polygraph test is that when a subject is lying in response to a question, he/she will produce psychologist responses that are

---

47 Supra 8, 13.
48 Supra 12, 77.
49 Supra 2, 108.
different from those that arise in the normal course. The procedure of the examination can be listed own as under-

- Several instruments like Cardiograph, Pneumograph, cardio cuffs, and sensitive electrodes are attached to the subject to measure his psychological responses.
- Then the examiners analyse and examine their results to gauge the credibility of the subject’s answer.
- Instrument such as cardiograph, Pneumograph, cardio cuffs, sensitive electrodes are used in the course of the Polygraph examination.
- The measure change in aspect such as respiration, blood pressure, blood flow, pulse and galvanic skin resistance.

The truthfulness or falsity of the subject is assessed by relying on the record of the psychological response. It is seen that on many times the suspect and defendants in criminal cases have sought reliance to this technique to demonstrate their innocence.\textsuperscript{50} It can be said that the theory behind the application of this technique is based on the fact that a guilty person may possess such knowledge which cannot be possessed by any other person who is innocent.\textsuperscript{51} The pertinent question would bring in emotional reactions in a guilty person alone in comparison to an innocent person.\textsuperscript{51}

Further it can be said that a person on whom this test is to be conducted is to sit on the Polygraph chair so that the person may face the instrument and the experts may ask the question from the accused in an easy way.

6.6 Recent advances in the Detection of Deception

The idea that the detection of deception is merely a kind of psychometric instrument, or a psycho physiological technique, must be considerably revised to take into account the social nature of both deception and its detection. The investigation of the social and other factors in deception has become a fundamental area of inquiry in psychology.\textsuperscript{52}

In 1895, Lombroso, who is known as the founding father of Criminology, was the first to experiment with a machine measuring blood pressure and pulse rate to

\textsuperscript{50} Id.,108.
\textsuperscript{52} “The Physiological Detection of Deception: The accuracy of polygraph testing can be affected by such variables as attentiveness, drugs, personality, and the interaction between examiner and subject”, available at: www.jsyore.org/stable/27851548 (visited on 04-12-2014).
Chapter VI

record the honesty of criminals. He called it a hydroshygmograph. A similar device
was used by Harvard psychologist William Marston during World War I in espionage
cases, who brought the technique into the American court systems. In 1921, John
Larson added the item of respiration rate, and by 1939, Leonard Keeler, one of the
founders of forensic science, added skin conductance and an amplifier,
therefore signaling the birth of the Polygraph as we know it today. Polygraph (Lie-
Detector) is based on the theory of emotional links of a person i.e. psychologically a
change in a person's consciously held emotion produces a protection response in the
form of physiological changes in his blood pressure, pulse rate, respiration and
electro-dermal response (GSR).

53

The main innovation in the traditional Polygraph has been the introduction of
computer to trace and examine the physiological reply and data, through some
innovations in the input devices to increase the number of recording, to decrease the
discomfort and reduce the time for examination have also come up. Computerized
Polygraphs have the following advantages:

• Operational training needs less time
• Provide better interpretable data
• No frequent calibrations as in traditional Polygraphs due to pen distortion.

Moreover the successful operation of Polygraph depends on the experience,
personality, integrity of the examiner, proper operational environment, and the
interrogation room.

6.7 Scientific validity of Polygraph Test:

Advancement in science and technology are unlikely to leave our untouched,
and the Polygraph is no exception. The Polygraph is a scientific instrument which is
used for research into bodily responses and their relationship with psychological
process. As an instrument, it is reliable in producing a record of bodily event. The
Validity of Polygraph testing means, its ratio of accuracy regarding the detection of
deception and truthfulness. Polygraph test take a number of forms and its validity can

53 M.K.Sahu, “Admissibility of Scientific Evidence and the Bias against Lie Detection” available at:
www.google.com (visited on date 21-17-2013).
54 Ibid.
be measured in a number of ways.\textsuperscript{56} 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 the 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 basically 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”. Construct validity is essential from theoretical point of view but from practical point of view “criterion validity” is necessary for validity analysis. “Criterion validity” means the relationship between test results with the ground truth. However, it is very difficult to generalize a data of validity criterion. it is not clear which part gives accurate result and which part does not give. Validity criterion is used in considering evidence about usefulness of test.\textsuperscript{57} At present there are different Polygraph tests based on different theories. This makes it difficult to establish construct validity. \textsuperscript{58} At the present time the significance of Polygraph test is increasing with passing of the time. Because by the help of this technique it is possible to detect the truth. The test is being conducted without any use of third degree method. In this technique the question is put up to the accused person and the accused person gives answer of the question only in yes or no. A Polygraph of the person subjected to test is taken and the experts analyse the Polygraph and gives their opinion in the court. Now the court has to decide about the admissibility of the said test result.\textsuperscript{59}

6.8 Constitutional validity of Polygraph test: Judicial Response

The lie Detection division renders valuable Polygraph aids in a number of important investigations conducted by CBI, Judiciary, Delhi Police and other law enforcement agencies. The Lie detection division maintain latest version of the computerized Polygraph equipment’s. The objectives of Lie detection are:\textsuperscript{60}

\begin{footnotesize}
\begin{enumerate}
\item \textit{Id.}, 494.
\item \textit{Ibid.}
\item Supra 6,580.
\item Dr. Gupta and Agrawal, \textit{Forensic Science in Criminal Investigation} 146 (Premier Publishing Company, Allahabad, 2013).
\end{enumerate}
\end{footnotesize}
• To verify the statements of suspects, witnesses and the complaints.
• To economise and accelerate the process of investigation by screening innocent
  person where a large number of suspects are involved.
• Scientific interrogation of suspects in white collar crimes.
• To corroborate the findings of investigation by investigating officers.  

The main legal provisions which govern the expert evidence (Lie Detector
test), are in Indian Constitution, Code of Criminal Procedure, Indian Evidence  
Act. In Indian Constitution there are various provisions which are related with the protection  
of the accused person .In the Constitution of India, 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 against himself. 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 basically 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  
the judicial interpretations evidence that is testimonial in nature. In other words, it has  
been held that the protection is available only to the evidence which require 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 with an offence it does not extend to the pre-accusation or  
investigation stage if a strict 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 issued directing him under pain or penalty to produce  
a document though ultimately it may incriminate him for the commission of an

61 Ibid.
62 Supra 35, 532.
offence.\textsuperscript{63} The Constitutional embodiment invigorating the ban on self-incriminating has been enshrined in Article 20(3) of the Constitution of India.\textsuperscript{64} Article 20(3) provides the protection to the accused person in respect of the conviction. In case of \textit{Sidhartha Vashist v. State} \textsuperscript{65} 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 jurisdictions as well as international human rights instruments. The guarantee of ‘presumption of innocence’ bears a direct link to ‘right against self-incrimination’ 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 the right to refusal to answer such questions 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 when a person can may claim the protection against self-incrimination under Article 20(3) of the Indian Constitution. In the case of \textit{State of Bombay v. Kathi kalu Oghad} \textsuperscript{66}, the Hon’ble Supreme Court observed that conducting the Polygraph by the police without the consent of accused person is clear violation of article 20(3) of the Indian Constitution. The right against forced self-incrimination 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 his 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 \textit{M.P. Sharma v. Satish Chandra} \textsuperscript{67}, 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

\begin{itemize}
\item \textsuperscript{63} A search warrant leading to discovery of contraband is a perfect example.
\item \textsuperscript{64} \textit{Supra} 20,533.
\item \textsuperscript{65} AIR 2010 SC 2352.
\item \textsuperscript{66} AIR 1961 SC 1808.
\item \textsuperscript{67} AIR 1954 SC 300.
\end{itemize}
therefore, to limit it would be to rob the guarantee of its substantial purpose and to miss the substance for the sound. 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 through the lips or by production of a thing or of a document or in other modes”.

These observation clear 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 Jawaya Kupar’s case it was held by the court that in the 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 realized 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 of 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 conducted with the free consent of the person. Free consent means that it is chosen one 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 wants to undergo Polygraph test but it is still to be shown that whether this voluntariness under coercive circumstances or not. 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 cannot 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 Nandini Sathpathi v P.L. Dani, the former Chief Minister of Orissa, has made complaint that she was being prosecuted for her refusal to answer

68 1955 (2) SCR 225.
69 AIR 1978 SC 1025.
police question about a corruption case lodged against her. She said that she cannot compelled 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 been 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\textsuperscript{70}, 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 answer or may not answer 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\textsuperscript{71}, the Honn’ble Supreme Court has emphasized on the importance of the preventing the cruel, inhuman, degrading treatment while a person is taken into custody. In the present context involuntary and forceful administration of any of the three scientific techniques like Narco-Analysis test, Polygraph test and Brain Mapping in a forensic laboratory or in a hospital, physically confining the subject will fulfill the requirement of custodial environment and thus will attract the provision under Article 20(3) and Article 21 of the

\textsuperscript{70}  2005 (1) CCR 335 (DB).
\textsuperscript{71}  AIR 1997 SC 610.
Constitution. This is applicable not only for the accused, suspect or witness but also for the investigation authorities who questioned in the process of investigation without being brought in the record as witness. It is clear that each of the three 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 21.72

In the case of Jiubhai Patel v. State of Gujarat73, 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 occasion. In this case it was held that the scientific tests such as Polygraph test, Narco-Analysis test can be conducted without taking the consent of the accused person. It should be kept in mind that there has been a great scientific advance and there is subtle difference between old test methods of blood testing or fingerprinting and the modern era’s 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 “Nemo tenetur seipsum prodere” which means no one is bound to be accused against himself.74 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.75 The protection has been given to the accused person 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

72 Supra 1, 110.
73 2005 (10) SCC 545.
75 M.P. Sharma and Ors. v. Satish Chandra, District Magistrate, Delhi and Ors. 1954 SC 154.
criminal charge or to a penalty or forfeiture” respectively. In the Polygraph test no force is used. The underlying principle of the Article is the presumption of innocence of the accused person in every criminal prosecution, where the burden of proving the guilt squarely lies on the prosecution. According to this principle, it is the duty of prosecution to discover facts and produce evidence to prove the guilt before the court. The natural inference would be that extracting information of facts from the accused person through Lie Detector devices would 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. 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. ‘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.

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. The purpose of lie detection is to elicit the truth from the suspects devoid of any physical coercion. Protection against self incrimination is an instrument for the protection of the innocent and not intended for the acquittal of the guilty.

In the famous case of Selvi v. State of Karnataka, there was a question before the court relating with the relevancy of Polygraph test. In this case the court

78 Supra 44.
has to decide that whether conducting the Polygraph test on the subject without his/her consent is constitutionally valid or not. The Hon’ble Court observed that Article 20(3) protects an individual’s 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 categorized as material evidence. In this case, the Supreme Court has laid down some guidelines regarding Polygraph test also. The Court further held that Polygraph test should not be conducted on the accused person without taking his/her consent. If such test is conducted without taking the consent of the accused person, it would be a clear violation of Article 20(3) of Indian Constitution.

In *Rojo George v. Deputy Superintendent of Police*\(^2\), CBI compelled the suspect to undergo the Polygraph test and Narco-Analysis test for revealing the truth. The suspect raised the plea that the proposed Narco-analysis test is extremely problematic test which was conducted after administering sodium pentathol due to which the central nervous system affects the heart rate slow and blood pressure became low. It was further stated that it is very difficult to determine the correct dosage of the drug to be administered on a subject since the same varies according to the age, sex, physical constitution and also mental attitude and will power. It was further stated that a wrong dose could send a subject into coma or even cause death. Further the petitioner apprehended that if he was subjected to Narco-analysis at this young age of 24, it would have far reaching consequences on both his physical and mental constitution. It was averred that he CBI attempt is to fasten the criminal’s liability in the above crime to someone. It was stated that the petitioner whole heartedly co-operated with the investigating authority while conducting the Narco-Analysis test as well as Polygraph test but the investigating authority was not able to collect any material. According the petitioner, investigating authority is bound to follow the procedure established by law even in the case of a suspect. He may not be compelled to undergo the test without an undertaking from the investigating authority that no adverse consequences would result by undergoing that test. It was also stated that subjecting a person into Narco-analysis would amount to violation of the

\(^2\) 2006(2) KLT 197.
fundamental right guaranteed to the petitioner under Article 20(3) of the Constitution of India. ‘Narco-Analysis’ is a scientific test conducted by the expert on the subject after taking all possible precaution. It is true that it has got adverse reaction also. But such adverse reaction can happen while administering any medicine prescribed by doctors practicing modern medicine. So merely because there is a remote possibility of adverse reaction, use of such techniques in conducting investigation cannot be prevented. It was argued that recording of a statement of a person undergoing Narco-Analysis would amount to testimonial compulsion and the same is violative of Article 20(3) of the Constitution of India. The protection against compulsion to be a witness is limited to person accused of an offence. There is no Constitutional protection to persons other than the accused. The immunity under Article 20(3) does not extend to compulsory exhibition of the body or giving blood specimen. It is a considered view that the same principle should apply to Narco-analysis test also because it is also a scientific test conducted by a team of expert and not will amount to custodial interrogation by police. In present days, the techniques used by the criminals for commission of crime are very sophisticated and modern. The conventional method of questioning may not yield any proper result at all. That is why the scientific tests like Polygraph, Narco-Analysis Brain mapping test etc are now used in the investigation of a case. When such tests are conducted under strict supervision of the expert, it cannot be said that there is any violation of the fundamental right guaranteed to a citizen of India.

In Criminal Justice System, forensic science occupies a very significant place and it is admissible in the courts. Section 53(1) of Cr.P.C.(Criminal Procedure Code) provides for the medical examination of the accused by the medical practitioner at the request of the police officer. According to Sce 53(1) of Criminal Procedure Code – “when a person is arrest on a charge of committing an offence under such circumstances that there are reasonable grounds for believing that an examination of the person will afford evidence as to the commission of an offence, it shall be lawful for a registered medical practitioner, acting at the request of the police officer not below the rank of sub-inspector, and for any person acting in good faith in his aid and under his direction, to make such an examination of the person arrested as is reasonable necessary in order to ascertain of the facts which
may afford such evidence, to use such force as is reasonably necessary for that purpose”.

Through this Section, the forensic science gets an entry into the field of criminal investigation. The Amendment of 2005 made to Sec 53 of Cr.P.C. positive and protective towards the recognition of the important of scientific test which include Narco-Analysis, Brain mapping apart from others.83

By virtue of sec 161(2) of Cr.P.C., the legislation has protected the citizen’s rights against self-incrimination. According to Sec 161(2) – “every person is bound to answer truthfully all question put to him by a police officer, other than the question the answer to which would have a tendency to expose that person to a criminal charge, penalty or forfeiture.” The right to silence has been granted to the accused and no one can forcibly extract statements from the accused who has the right to keep silent during the course of investigation.

Section 39 Cr.P.C. also casts an onerous duty upon any person to give relevant information to the police. This Section as well as other sections relating to information to investigators has not been held unconstitutional. For an effective and efficient investigation, such a power to investigator appears to be necessary for bringing criminals to justice.

It can be easily inferred from the bare reading of the aforesaid Section along with explanation that the term ‘examination’ used in the explanation is very wide to include modern scientific techniques of investigation including DNA Profiling, Narco-Analysis test and Polygraph test.

6.9 Evidentiary Value of Polygraph Test

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

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

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

Such documents are called documentary evidence.\(^8^4\)

According to above mentioned definition of ‘Evidence’, answers recorded during Narcoanalysis or Polygraph tests cannot permit them to be admitted as they do not fulfill required conditions, Factors and provisions of law. The 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.\(^8^5\)

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 the informations are extracted through so called scientific equipments and methodologies which scientists themselves question for reliability. Cardinal rule of evidence and criminal jurisprudence as well, is that the person making the statement must be in a fit state of mind.\(^8^6\)

“In general sense, ‘statement’ means an allegation, declaration matter of fact. The term has come to be a used of a variety of formal narratives of facts, required by the law in various jurisdictions as the foundation of judicial or official proceedings and in limited sense is a formal exact, detail presentation.\(^8^7\)

An oral or written assertion or non verbal conduct is intended by him as assertion. Oral or written verbal assertion or non verbal conduct of person intended by him as a substitute for oral or written verbal expression.\(^8^8\) Reports are sent monthly or periodically by a bank to its customer or by a creditor to a debtor, setting forth amount credited and balanced due.”\(^8^9\)

As confession (or the admission) is a statement, therefore the term ‘statement’ also needs some elaboration. In its primary meaning a ‘statement’ is “something that is stated”, but communication of that stated ‘something is not necessary in order that it may constitute a statement.\(^9^0\)

\(^{84}\) Section 3, Indian evidence Act, 1872.
\(^{86}\) Id., 167.
\(^{88}\) Ibid.
\(^{89}\) Ibid.
\(^{90}\) Supra 59, 139.
The word statement has also not been defined in the Evidence Act, but from sections 17 to 21, 32, 39, and 145 use the word in different contexts. A simple statement may either be written or oral. A statement may be made to someone for purpose of communication, yet it connotes a wider meaning. The words used in a statute are generally taken to be in the same sense throughout, unless there is something repugnant in the context.\footnote{Ibid.}

Section 24 to 30 of evidence Act deal with and this segment is a part of broader segment comprising from Section 17 to 31 which deal with admission generally. Sections 162 to 164, Cr.P.C. deal with various aspects of confession in different circumstances. Sections 24, 25, 26 of the Indian Evidence Act deals with confession made by the accused person to a police officer in the police custody. A confession of the accused leading to the discovery of fact, while in custody of police (section 27), so much of such information, whether it amounts to confession or not, may be proved.\footnote{Supra 65,144.} Section 28 deals with confession made after removal of impression caused by inducement, threat or promise. Such confessions are relevant under this section.

Confession may be divided into two category i.e. judicial confession and extra-judicial confession. Extra judicial confessions are those which are made by a person elsewhere than before a magistrate or a court, meaning thereby that they are made before a private individual, which includes even a judicial officer in his private capacity, or a judicial Magistrate not empowered to record the confession under the section 164, Cr.P.C., or a Magistrate, though empowered, recorded the confession at stage when section 164 does not apply.\footnote{Id., 149.}

The Supreme Court further observed that an extra-judicial confession must pass a test of reproduction of the exact words, the reason and motive for making the confession, and also the person selected in whom the confidence is reposed.\footnote{Rahim Beg v. state of Utter Pradesh, AIR 1973 SC 343.} These observations would naturally exclude the confession recorded through Lie Detector tests. Only one of the condition i.e., reproduction of the exact words may be complied, but the said tests would fail to comply other condition. There are great number of cases which hold that an extra-judicial confession must be received with
the greatest care and caution (which would naturally include the viability, drawback and acceptability of Lie Detector tests). In case of *Ram Singh v. Sonia*\(^{95}\), it was held by the court that where the court finds that extra-judicial confession is true and voluntary then it may enter into question of sufficiency. It was observed that for judging the confession court must examine the content and then must ascertain whether the facts are corroborated with other evidence, and finally the probability test should be applied. Application of probability test is necessary as the extra-judicial confession, as in nature of things stand, a weak piece of evidence.

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.

### 6.10 The Credibility of an Expert Witness

Another Act which relates to the constitutionally validity of Lie Detector on the subject is Section 45 of Indian evidence act. It is an ancient rule of common law that on a subject requiring special knowledge and competence, evidence is admissible from witnesses who have acquired by study or practice the necessary expertise. This is the most important section of the Act. According to Section 45 ‘When the court has to form an opinion upon a point of foreign law, or science or art, or as to identity of handwriting (or finger impressions), the opinions upon that point of persons specially skilled in such foreign law, science or art,(or in questions as to the identity of handwriting or finger impressions) are relevant facts.’\(^{96}\) The persons who conduct such scientific test are called experts.

In India, the evidence of Polygraph expert in order to be adduced in the courts it must be the first proved that the qualified polygraphist is in fact there as required under Section 45 of Indian Evidence Act 1872. It is a basically science, and provides the polygraph expert can show this qualification and experience the evidence of which

---

\(^{95}\) AIR 2007 SC 1218.

\(^{96}\) See also Section 293 of the Code of Criminal Procedure deals with reports of certain Government scientific experts.
Chapter VI

is relevant. But now the main question is admissibility of such evidence. In *Ram Singh v. Sonia & others*, the Supreme Court has held that since the polygraph evidence is not a subject coming under expert’s evidence as per Section 45 of Evidence Act and it being a science in mystique, it could at best be used as an aid to investigation and not as evidence. Since Polygraph examination cannot be admitted in Court they can only be used for investigation purposes. The investigation officer may see the polygraph test to help him in determining the truthfulness of a witness. It can be used to cross-examine a witness during investigation so as to come with the true procedure of the evidence.

By the Hon’ble Supreme Court’s judgment in *State v. Chaudhary* has not only eliminated the absurdity relating to typescript but it has also provided the guidelines for the induction of new types of scientific evidence. The question while arose here that who is expert then. However this section is silent on other aspects of forensic evidence that can be admissible in court in criminal proceeding. The right against self-incrimination, widely known as the right to silence is enshrined in the Code of Criminal Procedure. The foundation on which expert’s evidence rests is the supposed superior knowledge or experience of the expert in relation to the subject-matter upon which he is permitted to give an opinion as evidence. The credibility of an expert witness depends on the strength of the reasons stated in support of his conclusions and the data and materials furnished, which form the basis of his conclusion. The evidence of an expert is considered rather a weak type of evidence and the Courts do not generally consider it as offering "conclusive" proof and therefore, safe to rely upon the same without seeking independent and reliable corroboration. It has also been held that it is unsafe to convict the accused solely on the basis of expert opinion. Expert opinion evidence may be contradicted and cross-examined, like any other evidence. The position of an expert is that he must be regarded as any other independent witness, and although he enjoys such weight as may follow from his peculiar ability to assist the court, it will be a misdirection to direct the jury that his evidence could be accepted unless the witness himself betrays

97 Dr. Subhodh Kumar Singh, “Admissibility of Polygraph test in Indian Administration of Criminal Justice System” 1CrLJ 78(2012).
98 AIR 2007SC 1218.
reasons for rejecting it. There will be occasions where the evidence may have to be rejected on the procedural grounds and occasions where the court will have to choose between conflicting opinions from experts dealing with the same matters.

6.11 Admissibility of Polygraph Tests as Evidence: A Glimpse

The polygraph lie-detector technique for the detection of deception has been definitely established as a valuable investigative aid. It assists in the exoneration of the innocent as well as in the apprehension of the guilty. As with any diagnostic device or technique, however, the accuracy and validity of polygraph test results depend to a very great degree upon the competency and integrity of the examiner himself. As the uses of Polygraph techniques have grown in recent criminal investigations and evidence, there is increasing concern about the factors that may adversely affect their accuracy and their uses in administrative and judicial proceeding. Thus the High Court of Gujarat has held that “The legality, validity or evidentiary value of the Lie Detector test is again a question which has to be determined at the trial.”

In yet another case the accused was subjected to lie detection test and the honourable court held it admissible under section 293 of Cr.P.C. The court observed as per the provisions of Section 293 of the Criminal Procedure Code, any document purporting to be a report under the hand of Government scientific expert, upon any matter, duly submitted to him for examination or analysis and report in the course of any proceedings under the Code may be used as evidence in any trial conducted under the Code. As per Sub-section (4) (e), the Section 293 applies to the Director of a State Forensic Laboratory. Therefore, there is no need to examine the expert unless the Court feels it necessary. However, it is only opinion evidence, which requires further corroboration.

The High Court of Gujarat has observed that for the detection of white collar crimes, it is expected from the State to undertake the investigation through ultra modern machineries like Lie Detection test, Narco-Analysis test etc.

The Bombay High Court upheld the legality of Polygraph test in the case of *Ramachandran Reddy v. State of Maharashtra*\(^{107}\). In this case the court upheld special court’s order of Pune, allowing the SIT to conduct scientific tests on the accused in the fake stamp paper scam including the main accused, Abdul Karim Telgi. The verdict also said that the evidence procured under the effect of Lie-Detector test is also admissible. In the course of the judgment, a distinction was drawn between “statement” (made before a police officer) and “testimony” (made under oath in court). The judge, justice Palshikar and justice Kakade said that the Lie Detector and the Brain mapping test did not involve any “statement” being made and the statement made under Narco-Analysis test was not admissible in evidence during trial. The judgment also held that these tests involve “minimum bodily harm”.

Again in *Sasntokhben Sharmanbhai Ladeja v. State of Gujarat*\(^{108}\), the court observed that “when after the exhausting all the possible alternative to find out the truth and nab the criminal/accused and when it is found by the prosecuting agency that there is no further head-way in the investigation and they are absolutely in dark, there is a necessity for such a test. On the basis of revelation and/or the statement recorded while conducting /performing the Narco-Analysis test, prosecuting agency may have some clues which would further help and/or assist the investigation agency to further investigate the crime and at this stage, there will not be any bar of the Article 20(3) of the Constitution of India and merely conducting /performing the Narco-Analysis test on the accused, the protection guaranteed under Article 20(3) of the Constitution of India is not violated. As stated above, only at the stage when the prosecution agency is likely to use such statement as evidence and if it is inculpating and incriminating the person making it, it will attract the bar of article 20(3).” The court further observed that various provisions under the criminal Procedure Code right from Section 156 to 159 and other related provisions, collection of evidence by the police officer is permitted under the law. Conducting the Narco-Analysis test on the accused is to be considered as process of collection of such evidence by the investigation agency. The investigating agency cannot be prevented to interrogate the accused at the stage of investigation and restraining the Investigation Agency to further investigate the crime though the aforesaid two test would tantamount to

\(^{107}\) 2004 ALL MR (Cri) 1704.
\(^{108}\) 2008CriLLJ 68.
interfere with the right of the investigating agency to investigate the crime of which it is statutory authorized. In this case, the accused person was involved in fake stamp case. The accused brought for Polygraph test. He was first interviewed and interrogated and it was forced that he was concealing some relevant information. It was also found that he was also suspected to be lying about involvement of politician and police officers in fake stamp paper. On next day he was produced for Brain Mapping test. It was held by the court about the report of admissibility of Brain mapping test that no material placed on record to show as to how for the report can be relied on and report appear to be vague. Whether scientific tests are admissible or not, it will depend upon its authenticity.

The most recent famous is Badaun Rape Case, 2014, in which two girls age 14 and 15 year were missing from 27 May 2014. Their bodies were found hanging from a mango tree in the village in Ushait area on May 28. In this case, CBI conducted the Polygraph test on June 26, 2014 on the four persons of the family member of the girls, to find out the truth, because CBI was not satisfied with the statement given by the family members regarding the murder of the girls. In this case for conducting the Polygraph test on the persons, CBI has taken the consent from the concerned persons. A Central Forensic Science Laboratory team carried out the polygraph test on the accused person. CBI asked several question from the accused person related with the crime without revealing the process of the test to find out the real truth. At present the case is pending before the court.

There are many cases in which the accused person has refused from conducting the Polygraph test. For example, Patna police has started resorting to polygraph test in cracking complicated murder cases. As it is hard to accuse a kin of the deceased, the cops prefer to opt for polygraph test to get evidential support in their investigations. But, unfortunately, the suspect has the legal rights to deny any such test, leaving many case relating with murder unsolved. In 2011, in another sensational case of Sitaram murder, a retired All India Radio employee, Sitaram Yadav, was killed by unknown assailants and the case is still unsolved. Yadav was murdered with a hammer and the assailants had decamped with cash and valuables from his resident. In this case, the police were under the thought that it was a murder for gain but it does not seem the case. Yadav's body was found outside his house. The police supposed that the murder of Sitaram Yadav was not committed in the house. The police wanted
to use a lie-detector on Yadav's wife Shakuntala Devi, who was in the house when the crime took place. But she refused to undergo the test," said a senior police officer.

The amazing murder of Santosh Tekriwal, the owner of Azad Transport Agency, on July 10, 2009 is however to see any breakthrough. The Central Bureau of Investigation (CBI) is investigating the case. In this case, the investigation team wanted to conduct the polygraph test on the persons who were present at the time of murder of Santosh Tekriwal. But all of them refused from conducting the Polygraph test on them.

Earlier, the widow of slain Patna businessman Satyendra Singh demanded that a polygraph test be conducted outside Bihar on former MP Vijay Krishna, who has been convicted in the case of abduction and murder of her husband. She alleged that Krishna had influenced the director of the State forensic laboratory as he refused to conduct the polygraph test on the accused on medical grounds.

Likewise in July last year, a 40-year-old principal of a private school, Neelam Sharma, was beaten to death at her Patna residence under Patliputra police station. The murderer is still unidentified. Patna SSP Manu Maharaaj said that the police requested Sharma's husband to undergo a lie-detector test but he refused. "The accused are guarded by law, that no one can force the suspect to appear against himself. So, we cannot force anybody to appear for the test," he lamented.

Now, Patna police are going to request for polygraph test of Prabhu Gupta, son of city-based businessman Ramji Prasad Gupta, in connection with his murder. Ramji was shot dead on October 24 in the car parking of his Jagkailash Apartment at Patliputra Road No. 3 under Patliputra police station area.109

6.13 NHRC’S Guidelines on the Administration of Lie Detector or Polygraph Test:

Test on a suspect accused. The Commission, in 16 May 1997, had received a petition dated 12 May 1997 from Shri Inder P. Chaudhry, a resident of New Delhi, while he was lodged in the Shimla Sub-jail. The petitioner had alleged that while visiting Shimla to attend the hearing of a civil suit, he had been arrested by the Shimla

109 “Police rely on polygraph test in unsolved murder cases”, available at: www.legalservice.com (visited on date -04-12-2014).
Police in connection with a murder and thereafter had been subjected to various kinds of custodial torture for a period of 13 days of police custody. He had been illegally detained and tortured both physically and mentally and subjected to ‘Lie Detector Test’ without his consent and thereafter he had been administered certain intravenous drug. He had prayed that the Commission might look into his case and get the matter inquired by the CBI independently.  

The case was originally considered by a Member of the Commission on more than once occasion. The Learned Member did not find it a fit case for intervention by the Commission. The petitioner had sought review of the order of the commission. The review petition was placed before the same Bench in terms of Regulation 32 (b) of the National Human Rights Commission Procedure (Regulation), 1994. The Bench disposed of the review petition by an order dated 8 September 1998. Later the petitioner filed another petition dated 14 September 1998 for review. The case was later listed before the Chairperson. The petitioner along with his Counsel was heard on this matter and he had admitted that almost every allegation made in the petition before the Commission formed part of the Writ Petition filed before the High Court of Himachal Pradesh which had since been dismissed. A special leave petition also been filed before the Supreme Court which had also been dismissed.

As the complainant had also approached the High Court of Himachal Pradesh with a writ petition and later the Supreme Court with a writ petition and later the Supreme Court of India with a special Leave Petition but without success, the Commission declined to intervene in the matter. Subsequently, the review petitions filed by Shri I.P. Chaudhry were also dismissed. While dismissing his last review petition vide an order dated October 1999, the commission had observed, that as the Lie Detector Test to be administered to an accused is not regulated by Law, it is appropriate that concrete guidelines for the test should be formulated. It also observed that, however, apart from and as not applicable to the present case, the Commission may have to consider formulating appropriate guidelines for the conduct of “Polygraph test”.

110 Supra 87, 257.
111 Ibid.
112 Ibid.
Accordingly, a set of guidelines relating to administration of Polygraph Test was formulated and approved by the Commission. The Commission considering this aspect felt that as the Polygraph test was not regulated by Law it was appropriate that guidelines pertaining to the test should be formulated.\textsuperscript{113}

The National Human Rights Commission on 12 November 1999 adopted a set of guidelines relating to administration of the Polygraph Test or the Lie Detector Test. The Commission had been receiving a number of complaints pertaining to the conduct of this test. It is allegedly conducted after a certain drug is administered to the accused. As the existing police practice in invoking Lie Detector Test is not regulated by any 'Law' or subjected to any guidelines, the Commission felt that it could tend to become an instrument to compel the accused to be a witness against himself, violating the Constitutional immunity from testimonial compulsion.\textsuperscript{114}

The serious matters concerning invasion of privacy have received anxious consideration from the Courts too. A suggestion for legislative intervention was made, in so far as matrimonial disputes were concerned. American Courts had taken the view that such steps are routinely a part of everyday life and had upheld their consistency with due process. To hold that because the privilege against testimonial compulsion protects only against extracting from the persons own lips and the life and liberty provisions are not attracted, may not be wholly satisfactory. In India's context, the immunity from invasiveness (as an aspect of Article 21) and from self-incrimination (Article 20(3)) must be read together. The general executive power cannot intrude on either Constitutional rights or liberty or, for that matter any rights of a person. In the absence of a specific 'law', any intrusion into fundamental rights must be struck down as constitutionally invidious. The Lie Detector Test is much too invasive to admit of the argument that the authority for this test comes from the general power to interrogate and answer questions or make statements. However in India, we must proceed on the assumption of Constitutional invasiveness and evidentiary impermissiveness to take the view that such holding of tests is a prerogative of the individual not an empowerment of the police. In as much as this invasive test is not authorized by law, it must regarded as illegal and unconstitutional unless it is voluntarily undertaken under non-coercive circumstances. If the police

\textsuperscript{113} Ibid.

\textsuperscript{114} Id.
action of conducting a Lie Detector Test is not authorized by law and impermissible, the only basis on which it could be justified is that if it has volunteered.\textsuperscript{115}

However, there is distinction between 'volunteering' and 'being asked to volunteer.' This distinction is some significance in the light of statutory and Constitutional protections available to any person. There is a vast difference between a person saying, 'I wish to take a Lie Detector Test because I want to clear my name'; and the person was told by the police, "If you want to clear your name, take a Lie Detector Test." A still worse situation would be by the police saying “Take a Lie Detector Test and we will let you go.” In the first situation, the person voluntarily wants to take the test. It will still have to be examined whether such volunteering was under coercive circumstances or not. In the second and third situations the police implicitly/explicitly link up the undergoing of the test to allowing the accused to go free.\textsuperscript{116}

The extent and nature of 'self-incrimination' is wide enough to cover the kinds of statements that were sought to be induced. The test retains the requirement of personal volition and states that self-incrimination must mean conveying information based upon the personal knowledge of the person giving information. The information, sought to be elicited in a Polygraph test, is always information in the personal knowledge of the accused.\textsuperscript{117}

The Commission, after bestowing its careful consideration of this matter of great importance laid down, the following guidelines relating to the administration of Lie Detector Test:

No Lie Detector Test should be administered without the consent of the accused. Option should be given to the accused as to whether he wishes to avail the test. If the accused volunteers for the tests, he should be given access to a lawyer. The police and the lawyer should explain the physical, emotional, and legal implication of such a test to him. The consent should be recorded before a Judicial Magistrate. During the hearing before the Magistrate, the accused should be duly represented by a lawyer. At the hearing, the person should also be told in clear terms that the statement that is made shall not be a 'confessional' statement to the Magistrate but will have the

\textsuperscript{115} Ibid.
\textsuperscript{116} Ibid.
\textsuperscript{117} Ibid.
status of a statement made to the police. The Magistrate shall consider all factors relating to the detention including the length of detention and the nature of interrogation. The actual recording of the Lie Detector Test shall be done in an independent agency (such as a hospital) and conducted in the presence of a lawyer. A full medical and factual narration of the manner of information received must be taken on record.\textsuperscript{118}

Thus it can be said that before conducting the Polygraph test following guidelines must be followed:

- No Lie Detector Tests should be administered except on the basis of consent of the accused. An option should be given to the accused whether he wishes to avail such test.
- If the accused volunteers for a Lie Detector Test, he should be given access to a lawyer and the physical, emotional and legal implication of such a test should be explained to him by the police and his lawyer.
- The consent should be recorded before a Judicial Magistrate.
- During the hearing before the Magistrate, the person alleged to have agreed should be duly represented by a lawyer.
- At the hearing, the person in question should also be told in clear terms that the statement that is made shall not be a “confessional” statement to the Magistrate but will have the status of a statement made to the police.
- The Magistrate shall consider all factors relating to the detention including the length of detention and the nature of the interrogation.
- The actual recording of the Lie Detector Test shall be done in an independent agency (such as a hospital) and conducted in the presence of a lawyer.
- A full medical and factual narration of manner of the information received must be taken on record.\textsuperscript{119}

\textbf{6.14 Procedure to be followed by Police Officers for using the Polygraph:}

- The Investigating Officer (I.O) should ask the suspect/accused whether he/she wishes to avail the test.

\textsuperscript{118} Id.
\textsuperscript{119} Id.
• If the suspect/accused does not volunteer to undergo the test, write a C.D. stating so and inform the superior officer.

• If the accused volunteers to undergo the test his consent should be recorded before a Judicial Magistrate and access to a lawyer should be given. The I.O. should file an application in the jurisdictional Court and request the judge to record the consent of the suspect accused.

• The suspect/accused should be given access to a lawyer and the physical, emotional and legal implications should be explained to the suspect/accused. by the I.O. and his lawyer.

• The Prosecutor should inform the suspect/accused at the hearing i.e. when the consent is about to be recorded that the statement made shall not be a “confessional” statement to the Magistrate but will have the status of a statement made to the police.

• After the consent is recorded, the I.O. should meet the Joint Director of A.P. State FSL at Hyderabad and give the full facts of the case and the doubts, apprehensions about certain aspects for which suspect/accused was unable to give or which the I.O. could not obtain. He will prepare a set of questions to be administrated to the suspect/accused.

• The I.O. will then discuss these questions with the superior officer and after finalization should either bring the suspect/accused to the FSL in Hyderabad for the Test or send the Polygrapher to the location where the suspect/accused is, as per the choice of suspect/accused.

• While conducting the test ensure that the test is conducted in the presence of a lawyer and preferably a doctor.

• After the test is over take the report from the Joint Director, FSL and discuss with the superior officer for further necessary action.120

6.14 Conclusion

In present days, the techniques used by the criminals for commission of crime are very complicated and modern. The predictable technique of questioning may not

120 T. Murali Krishna,” Polygraph test (Lie –Detector Test) and Truth Serum” available at www.Polygraph.com (visited on date 05-10-2010).
submit any fruitful result at all. That is why the scientific tests like Polygraph, Brain Mapping, Narco-Analysis, etc. are now frequently used in the investigation of a case. When such tests are conducted in extreme necessity, strict supervision of the competent expert, it cannot be understood that there is any violation of the fundamental rights guaranteed to a citizen of India.

In India this technique has proved to be a quite helpful technique. With the help of this technique various criminal cases have been successfully solved by the various courts. It has become an imminent requirement for the state Government to work with the Central Authorities in order to develop the analytical capabilities of their police departments. Due to the sophisticated modes and changing conditions of committing crimes by the shrewd criminals there is a dire need to apply the new scientific technique like Polygraph test.121

By and large, the lie-detector evidence has limited judicial recognition. In a few courts of America, 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 the 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 Detection, it is strongly felt that the courts should accept this 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 with impunity in criminal investigation.

In India, a good beginning was made by the Central Forensic Science Laboratory, Central Bureau of Investigation, New Delhi by providing the facility of Polygraph for the crime investigation purposes. The tests have not been utilized in the courts. However there is no law which forbids the use of Lie Detector. It is the humble opinion of the researcher that the scope of section 45 of the Indian Evidence Act must be made function wide enough to accept the Polygraph evidence also. Lastly

in the words of Wicker of the college of Law University of Tennessee “If and when convincing evidence is produced that are reasonably reliable, scientific methods of exposing falsehoods either in or out of the court rooms are available, these methods should be promptly utilized by the legal profession”.