

Legal status of forensic psychological tests in India

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ABSTRACT

Objective: Indian judicial system is in such a state that large number of cases is pending before the court. The burden to investigate, to collect the evidence as per law and dispose the cases quickly to meet the deadline set by the court police resort to third degree treatment. On account of application of third-degree methods, the suspect/accused are dying thus violating the fundamental rights to life and personal liberty guaranteed under article 21 of the constitution of India. **Method:** With the development of science and technology eliciting the information in a quick manner is possible by adopting the scientific methods of polygraph, Brain Mapping, Narco –analysis and FMRI techniques. **Results and Conclusions:** These scientific examinations join the missing link and strengthen the chain of investigations. Extracting the information related to crime helps to prevent the criminal activities. The scientific test helps to gather evidence which is difficult through ordinary means. Responses generated through scientific tests helps to discover the fresh facts or materials that will be relevant to the case.

Keywords: *Forensic science, Forensic psychology, Detection of deception test, Misconception, Judgments, Apex court*

During Medieval period for extracting the information torturing a person by using 3rd degree methods were common. When an offense is brought to the notice of police it is their responsibility to investigate in to the matter, find out the accused, ascertain the facts and circumstances and present to the court to find the suspect guilty or not. But in the present circumstances criminals have become sophisticated and are adopting cutting edge technologies for commission of the crimes. They hardly leave any evidence at the crime site. The use of 3rd degree method by the police only makes out fabricates cases and suppresses the truth. Consequently, custodial atrocities, custodial death is on increase. It is big blow on the “rule of law”. The soft option in avoiding custodial deaths and 3rd degree methods are called “DDT” (Detection of deception techniques). DDT is useful to extract the concealed information from the brain of the suspect which is crucial for criminal investigation. These DDT test so called scientific procedures help the investigating agency to gather the evidences related to crime and there by assist in increasing the rate of acquittal

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Received: September 01, 2020; Revision Received: September 21, 2020; Accepted: September 27, 2020

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of the innocent. DDT includes “Polygraph”, “Brain Mapping”, “Narco-analysis” and FMR I tests.

Forensic psychology places a vital role in detection of crime by adopting psychological techniques and tools in collecting the evidences associated to crime. In the article “Investigation and law” by Manu Saxena of Allahabad high court, says that the scientific technique of Polygraph, Brain Mapping and Narco analysis strengthen the collection of evidences by protecting the legal right of suspects. The executions of crimes by suspects are stored in the brain as an experiential knowledge. The techniques of Polygraph, Brain mapping and Narco analysis extract the information hidden in mind of person as an experiential knowledge.

MATERIAL AND METHODS

Polygraph tests

The term polygraph means many writers it measures body activity and records the changes occurring in body activity graphically. Polygraph test measures the Autonomic Nervous System (ANS) variation. The polygraph works on principal that body activity changes due emotional factors. These changes are involuntary and automatic. Polygraph diagnoses the lying in response to a question that produces physiological changes which are different from those that arise in the normal response. Polygraph measure changes in areas of respiratory system, Cardio vascular systems, and Electro dermal systems. The truthfulness or lying is assured by analyzing the graphical changes of the responses. **Pneumograph** one of the components of polygraph measures chest movement and velocity while subject breaths. **Pneumograph** has two tubes one fastened around chest region to record thoracic breathing and another around abdominal region. **Pneumograph** records any deviation from normal breathing while the subject responds to the questions measured. **Galvanograph** is the important component of polygraph testing. It measures electrical conductance of the skin while responding to the question. This component consists of 2 electrical sensors attached to the fingertips of the subject. It is called GSR (Galvanic Skin Response). The **Cardio-Sphygmograph** is third important component of polygraph. This component of polygraph measures variation in blood pressure and heart beat pattern while responding to the questions. A cuff wrapped around the subject arm is inflated to measure the variation while the subject responds to the questions. Following picture 1 and figure 1 shows attachment of the person to the equipment along the polygraph recordings.



Picture -1

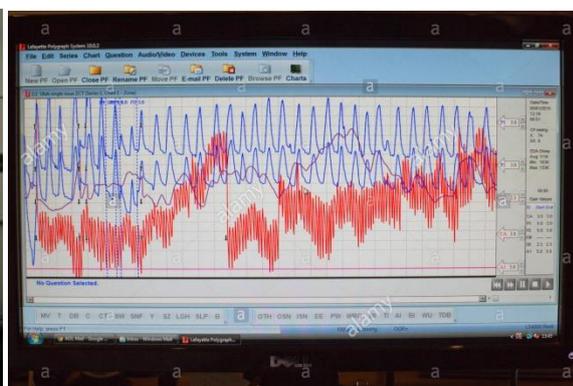


Figure -1

Polygraph testing consists of three phases 1. Pretest interview 2. Polygraph examination and 3. Post test interview. The objective of pretest interview is to remove unfounded fears

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regarding polygraph examination MMSE exam will be conducted to assess the mental status. Consent will be obtained during this phase and rapport will be established. Actual polygraph examination will be conducted during the second phase. Questionnaire consists of relevant, irrelevant and neutral questions. Polygraph examination will be concluded during the post test phase.

Narco-analysis

Narco-analysis test will be conducted in Operation Theater (OT) along with team consisting of physician, anesthetist, forensic expert, OT nurse and an OT attendant. The subject will be attached to the BIS monitor along with the other gadgets. One gram of sodium Pentothal will be diluted 200 ml with distil water. The dissolved solution is administered intravenously along with 10 % of dextrose with the help of anesthetist. The revelations made during the state of trance are video recorded. When the drug Pentothal Sodium is administered intravenously, the subject traverse through 4 stages

1. Awake stage
2. Trans stage
3. Sedative Stage
4. Anesthesia Stage

The following picture 2 shows the video record in the trans state of the person in a National important case.



Picture -2

A relatively lighter dose of pentothal sodium is injected and maintained in a trans a stage for the required period to extract the information related to crime under investigation. Trance state facilitates in handling negative emotion in a positive manner. It helps in exploration and identification of unresolved conflicts about the events. It induces the subject to divulge the information which usually not revealed in conscious awareness. The reversal of this process is immediate once the administration of drug is discontinued.

Brain Mapping

This technique is based on fact on that brain has extensive record of all information related to a crime. By recording the bio electrical activity of the brain this information can be retrieved. Activity of the brain is measured by using multi-channel electrodes placed over the scalp of the individual while processing the information related to the crime. This technique is also known as P300 wave test. The neurons activity gets triggered by the exposure of subject to the stimulus related to crime under investigation by generating Positive responses if individual has truthfully participated in the crime. Following figure 2 depicts brain identification of stimulus and generation of P300 response.

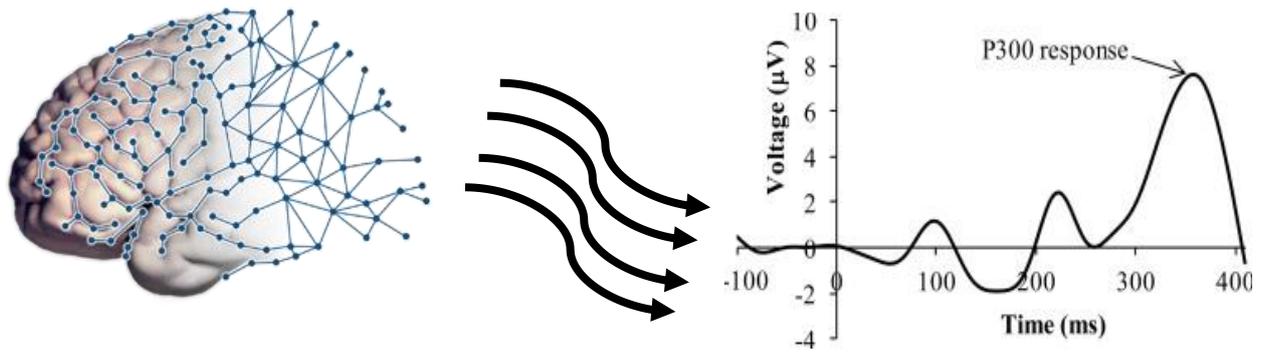


Figure 2

The test measures a P300 wave, an Event Related Brain Potential (ERP) emitted by the brain after processing an event. ERP measurement is indicative of cognitive mental activity. The measurement of cognitive mental activity allows the examiner to ascertain whether subject recognizes the stimulus to which he/ she had actively participated or witnessed. Ascertaining the subject familiarity of the probes helps in detecting of deception, truthful participation or to gather useful information. The test was further justified on the ground that the test is totally noninvasive. Examination merely show whether the accused has information of the crime or not.

FMRI

Functional Magnetic Resonance Imaging is a Neuro-scientific technique; it involves the use of MRI scans for measuring blood flow between different parts of the brain which bears perfect correlation to the subject truthfulness or deception. The following figure 3 shows the truthful area and lie area of the Brain when the questions related to crime under investigation were measured.

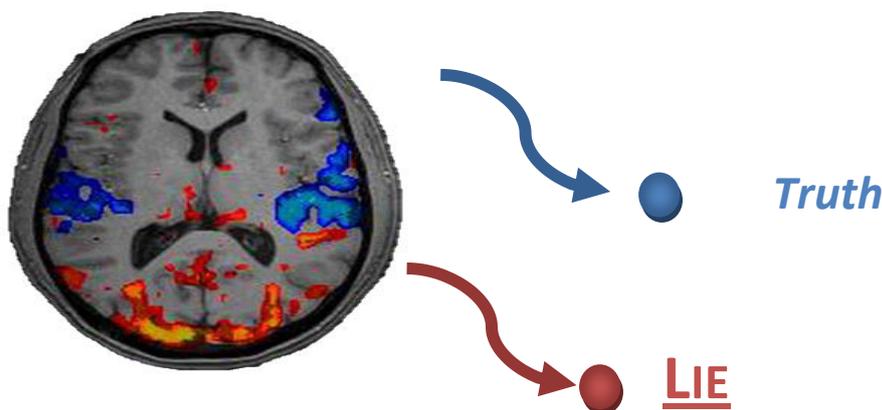


Figure 3

Forensic psychological test on the accused thus plays a vital role in collecting evidence, if accused remains silent and does not answer any questions; the investigating agencies are forced to use torturous method to extract information about the crime. Forensic psychological method thus plays significant role in extracting the information scientifically and generating the evidence related to the crime.

DISCUSSION

The court of Kerala in case of *Rojo George Vs Deputy Superintendent of police* allowing the Narco-analysis test observed that in present days, techniques used by criminals for the commission of the crime are very sophisticated and modern. The conventional method of questioning may not give any results. That is why the scientific test like polygraph, Brain Mapping, Narco-analysis etc., are now used in the investigation of the case. When such a test is conducted under strict supervision of the expert it cannot be said that there is any violation of fundamental rights guaranteed to citizen of India.

In earlier land mark judgment by *Madras high court* in *Dinesh Dalmia V. State*, court observed that where the accused had not allegedly come forward with the truth, the scientific tests are resorted by the investigating agency. They should complete the investigation within a reasonable time. If not benefit of delay is given to the accused. If the accused feels not to co-operate with the investigation to unravel the mystery surrounding the crime, scientific method have to be carried out to find the truth. From the above discussion it is very evident that conducting the Narco analysis test does not violate article 20 (3) per se. Only after conducting the test if the accused divulges the information which is incriminatory it will hit the article 20 (3). Information divulged during these scientific tests help the investigating agency. In the judgment court also held that Narco-analysis test is a step-in aid of investigation and may lead to collection of further evidences. Therefore, with reference to proliferation of crime against the society at large and the need of proper investigation is essential while ensuring that constitutional rights are not infringed. The court's opinion is that Narco-analysis does not suffer from any constitutional infirmity as it is a step-in aid for investigation. Thus, court ordered the accused to undergo narco-analysis test in a stipulated period. Further, court has said that such a test does not amount to testimonial compulsion.

In case of *Santokben Sharma bhai Jadeja Vs State of Gujarat, Gujarat High* court held that "Narco analysis test is conducted under the supervision of doctors and proper care is taken and there is consent, with the observation of physical and mental state of accused". Gujarat High Court held that the protection guaranteed under Article 20(3) could not be said to have violated on merely conducting performing of a Narco Analysis Test and Brain Mapping Test on the accused. Furthermore, the bar under Article 20(3) comes into play if at any stage the prosecuting agency is using the statement given as part of the test as evidence and if it is inculcating and incriminating the person making it. It also held that Conducting/performing of the aforesaid tests is a part of investigation and for the investigation and the consent of the accused is not required. As such the element of risk is minimal. Risk is in fact part of life and pervades in most of human activities and on this ground alone therefore impugned test cannot be condemned.

Ramachandra Reddy Vs State of Maharashtra, Maharashtra High Court, declaring the constitutionality of the tests, held as follows: "It is also to be considered in the light of other equally important provisions of the Constitution. Article 51(A) which has been added to the Constitution by subsequent amendment provides via Clause (1) which says that it shall be the duty and the duty cannot be properly done by the State, if large protection is unnecessarily spelt out from other provisions like Article 20(3). Prevention of crime is a sole prerogative of the State and the punishment of the crime if proved is also the duty of the state. Fetters on these duties can be put only in extreme cases where the protection of fundamental rights weighs more than the fundamental duty casts on the State. However, we need not further deal on this aspect for the reason that in our opinion administration of these

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tests against the will of the person to whom it is sought to be administered does not violate the guarantee of Article 20(3) as information obtained through Brain-mapping and Polygraph is not a statement and that it is not incriminatory in any manner.

It is in Narco-analysis where it is a statement and unless it is shown to be incriminating to a person making it, it does not give rise to the protection under Article 20(3). The petitions are premature in relation to the third test.”

Dr. Rajesh Talwar and another Vs. CBI through its director and other, commonly known as Arushi murder case, the Narco test cracked the case and played the crucial role to find out the Innocents and the accused.

The ***Andhra Pradesh High Court in State of Andhra Pradesh Vs. Inapuri Padma***, relying on the above decisions, again upheld the constitutionality of Brain mapping and Polygraph tests as it was felt that unless the culprits are nabbed by applying the scientific methods, there is every danger of the criminals gaining an impression that there is no agency that can bring them to the book making them answerable for the commission of the crimes. By administering Brain mapping, Narco analysis and Polygraph tests, it is not known what statement comes from the person who undergoes the test, whether incriminatory or not. Therefore, the protection given under Article 20(3) from compulsory testimony cannot be applied in respect of these tests.

With respect to constitutionality of involuntary administration of Narco analysis, in ***Shailender Sharma Vs. State, Delhi High Court*** upholding the validity of the same observed that having regard to the proliferation of crimes against society, it is necessary to keep in mind the need of the society at large and the need of a proper investigation while ensuring that constitutional rights are not infringed. The court observed that the Narco analysis Test does not suffer from any constitutional infirmity as it is a step-in aid of investigation. When an investigative agency does not have any vital leads, use of Narco Analysis is of particular relevance in the context of terrorism and its related cases, conspiracy to murder and in serious offenses. During Narco analysis any self-incriminatory statement, if made by the accused, cannot be used or relied upon by the prosecution.

The world best investigating agency at US has used the Narco-analysis test for extracting the truth after September 11 incident. Gerald Posner has written that US agency also privately believes that the Supreme Court of US implicitly approves using such test when the public safety is at the risk.

Prof. N R Madhavan Head of Drafting committee of National Criminal Justice System Policy recommends the use of scientific measures in investigation in India.

Apex court Judgment

In ***Somprakash Vs State of Delhi*** Supreme Court recognizes the necessity and the requirements of scientific investigations. Law commission also emphasizes the need of training officers in using scientific methods of investigation DDT's are revolutionary tools of forensic science that can proved to be very fruitful in crime investigation.

In ***Smt. Selvi & ORS. Vs. State of Karnataka*** A bench justice of India KG Balakrishnan, Justice R.V. Raveendran, J.M. Panchal hold that no individual should be forcibly subjected to these techniques, whether in the context of investigation in the criminal case or the

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otherwise bench said however we do leave room for the voluntary administration of this techniques. Although the High Court's mostly decided in favor of constitutionality of involuntary administration of the tests, they had not analyzed the limitations of the tests. This was dealt in detail by the Supreme Court of India in Smt. Selvi & Ors. vs. State of Karnataka. Furthermore while the court considered the constitutionality of involuntary administration of the tests and admissibility of the information availed thereof, it answered two main issues: firstly whether the tests amounted to violation of right against self-incrimination and secondly, whether it amounted to violation of the fundamental right to freedom of life and liberty under Article 21 of the Indian Constitution, certain misconceptions were created following the judgment in the Apex court. Judgment says the information or material that is subsequently discovered with the help if voluntarily administration test can be admitted in accordance with section (27) of evidence Act. Information extracted through polygraph test; Brain Mapping Test cannot be equated with the testimonial compulsion because the subject is not required to give a verbal answer thereby falling outside the scope of Article 20(3). The verbal revelation made during Narco-analysis does not attract the bar of article 20(3) since the inculpatory or exculpatory nature of revelation is not known at the time of conducting the test. The Apex Court directed to conduct the test by the direction of jurisdictional court after obtaining "**informed consent**" of the subject. In Selvi' case the Apex Court emphasized and clarified the bar on article 20(3) and concluded that scientific methods adjoin missing links and strengthen the weak chain of investigation. In a situation where testimonial response is used for comparison with facts already known to investigator it is inherently different from a situation by testimonial response. These responses help the investigator to discover the fresh facts or material that could be relevant to the ongoing investigation.

In a recent judgment in July 2020, Haryana court in 2019 had allowed Rud and Baljinder to undergo Forensic Psychological test at DFSL Gujarat in Maninder Singh murder case. Maninder Singh a resident of Radur village in Yamunanagar district Haryana was found missing after he stepped out with his friends Rud and Baljinder. These two insisted that Maninder sing had drowned near Darbar Gat. Family refuse to believe this as Maninder was good swimmer. The court acknowledged the report of the forensic psychological test of BEOS and proved that the Duo had no role in Maninder singh' s drowning in the cannel of Yamuna which could indeed be an accident. The finding of this forensic report was held valid by the court in a recent order which opined both the suspect did not participated in the killing of Maninder by drowning him. Court transpired that the deceased was in an intoxicated state while he jumped into the heavy flow of water. This led to his drowning. Thus, court upheld the Forensic Psychological test findings.

CONCLUSIONS

The manner in which modern day criminals make use of science and technology in perpetrating the criminal activities with relative impunity has compelled rethinking on the criminal justice establishment and to seek the help of scientific community to the Police, prosecutors and the court. These tests are successfully used to fight custodial deaths. Picture 3 shows the number of high-profile cases were subjected to this test to extract the information to avoid 3rd degree police torture at Forensic science laboratory, Bangalore. It is the duty of the judge to see no innocent is punished and no guilty escapes.

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Picture - 3

To mention a few sensational cases of national, international ramification that were subjected for Narco-analysis , Polygraph , Brain Mapping at Bangalore FSL are : Abdul Karim Telgi: prime accused in stamp paper scam, Selvi Murugesan sitting MLA of Tamil Nadu, Mumbai police inspector Daya Nayak, Naxalite Mallika and Naxalite from Maharashtra, Abu Saleem from Bombay Blast case , Preeti Jain and Naresh Paradeshi and Arun Gawli politician in Madhur Bhandarkar case, suspects of Malegaon blast case , Suspects from Mumbai train blast case, prime accused from Krushi Bank scam, Nadeem Kashmiri in HSBC fraud case, Mumbai serial killer case, suspects from dacoit Veerpan case, Terrorist involved in Indian institute of science case, Double murder of Arushi-Talwar – servant case etc. By adapting these scientific methods many crucial cases can be solved and the victims can be given justice. Thus Polygraph, Brain Mapping and Narco-analysis play a vital role in Indian Evidence Act.

The Malimath committee on criminal justice reforms on examination of inquisitorial system followed in France, Germany and other continental countries recommends that some of the good features of this system should be adapted in adversarial system to make it more effective with regard to right to remain silent article 20(3). The committee recognizes the accused as the best source of information and feels that without subjecting him/her to any duress away to top the critical source of information is by adapting scientific methods. It prescribes the freedom of the court to question the accused and draw adverse inferences upon the refusal to answer.

Legislature should make this test as a part of investigation process in crimes which affect the state and society at large like bomb blast, terrorist attacks, scams etc. Awareness should be created amongst the people regarding these tests.

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Acknowledgements

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author declared no conflict of interest.

How to cite this article: Malini S & Chandrakanth B K (2020). Legal status of forensic psychological tests in India. *International Journal of Indian Psychology*, 8(3), 1885-1893. DIP:18.01.195/20200803, DOI:10.25215/0803.195