

CRIMINAL INVESTIGATION SYSTEM AND SCIENTIFIC TECHNOLOGY

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ABSTRACT: In this present time of revolution, the advancement in technology has changed the mean of investigation in forensic field. The legal and judiciary systems are influenced and benefited by these changes of identification establishment and evidence detection techniques. The prior responsibility of the investigation is to convert the doubt into reasonable certainty of the suspect either guilty or the innocence which require a lot of efforts to discover the root cause of crime. Generally, the investigation ended up by the adoption of the unfair and illegal means. The traditional techniques have helped to be a great assistance in many cases in gathering the information from the suspects and proved their significance in areas of questioned documents, fingerprints etc. Now in this generation of digitalization and computer approach, changes have become essential for investigation. It can prove the crime of the suspect beyond all reasonable suspicion and can protect the innocent from wrong conviction in criminal jurisprudence.

KEYWORDS:- Identity; Crime; Questioned Documents; Fingerprints; Digital Evidences.

INTRODUCTION:-

Society have a dynamic nature and in the changing paradigm of society the individual started to search their place in the domain of comfortability and for these they want to be strong economy, strong in politics and in the culture this lead a huge competition among the people and people started using viewer technologies in every area so that one will always dominate others.

The criminal justice system is no more different from other systems and it has also affected from new technological advancements. The deceptive detection test is one of the technologies which utilizes as a tool in the extraction of truth in the investigation process. It includes Lie detector, Narco Analysis, brain mapping etc. As in present context society members of new criminal activities have grown up and criminals have started using new techniques for hiding and committing crime making it very difficult for investigating agencies

to solve these complex cases with traditional methods. That there is great demand of new technologies in the criminal justice system. Even various experts and committees have also recommended for the use of these technologies. Technologies are not only important for investigating the crimes but also helpful in the tracking out the future criminal activities going to commit by the legal, ethical and some medical issues regarding use and implication of these techniques.

Kinds of Detection Methods:

In Modern time the crime detection or investigation long established Laws of evidence and criminal jurisprudence with the introduction of new techniques of crime detections. The Kinds of crime detection are as follows:-

1. Narco-Analysis
2. Hypnosis
3. P-300 Test or Brain Mapping and
4. Polygraph Test or Lie Detection Test
5. Finger Print and Writing

1. Narco-Analysis

The term Narco analysis is derived from the Greek word Narco, meaning anesthesia or toper and is used to describe. In the Narco analysis test, the subject imagination is neutralized by making, him semi-conscious in this state, it becomes difficult for him to lie and his answers would by restricted to fact he is already aware of. Experts inject the subject with Sodium Pentothal or Sodium Amytol.

“Truth serum” is a colloquial name for any of a range or psychoactive the best aid to a defense against Narco interrogation is for e -knowledge of the process. Such test are generally resorted to in case of white collar crimes or in heinous crimes. The Narco analysis test is known as Lie Detection testing (L.D.T) or Truth System Testing (T.S.T). In this test probes are attached to various nerve endings by passing a serum through the blood. Slowly the person goes in to an unconscious state and speaks about things that are present in his mind.

A Person is able to lie by using his Imagination. In the Narco Analysis Test, the subject imagination is neutralized by making him semi-conscious. In this state it becomes difficult for him to Lie and his answers would be restricted to facts he is already aware of. Expert inject the subject with Sodium Pentothal or Sodium Amytal. The dose depends on the person's sex, age, health and physical condition. A wrong dose can result in a person going into a coma or even death. The subject is not in a position to speak up on his own but can answer specific but simple questions. The answers are believed to be spontaneous as a semi-conscious person is unable to manipulate the answers.

Jurist- Alexander Smith said that the "memory is a man's real possession in nothing else is he rich in nothing else is his poor. Crime wave deceives, criminal mind perceives and criminal soul conceives."

The element of criminal instinct is present in the nature of human being since the birth of the cosmos. An effort has been made to discover the root cause of crime but the reach, so far has been in vain. When crimes are emerging on every inhabited path of the globe, further more attempts to stop crime are made, The revolution in scientific technology is waving's like fast-flowing air and water in the modern world of advancement. Scientific invention and discoveries are growing as much faster speed in every sphere of life.

Science and technology has made life of people luxurious in various ways. The intersection of Law, science and technology has flourished to become a local point for resolution of many important issues such as Scientific Evidence, genetic and biological research cloning and privacy of nervous system of person. Science and Law are inter-dependable. The field of Law is also under the shadow of scientific inventions, judicial system, particularly the criminal justice system, is not untouched with the advancement of science.

Meaning of Narco – Analysis –

The term "Narco-analysis" is derived from the Greek word "Narke" means "Anaesthesia or Torpor" and is used to describe a diagnostic and psychotherapeutic technique that uses psychoactive drugs, particularly barbiturates to induce a state of stupor in which mental elements with strong associative effects come to surface, where they can be exploited by the therapist or investigating agency.

Narco –Analysis basically is attested in the domains of psychology to provide functional respite from some, Psychological disorder. Psychiatrists hold that some 50%

of all individuals are suggestible even while fully conscious, meaning they can be made to believe events that never actually happened. Thus under the effect of drug, the patient may say things that he wished were true and not that were necessarily true.

In Wikipedia- Meaning of Narco test is, in Narco Analysis test the person is injected with "truth serums" that cause the person to become uninhibited and talkative. Experts inject the subject with sodium Pentothal or Sodium Amytal the dose is dependent on the person's sex, age, Health and physical condition

What is the full form of Narco-?

The Narco or most commonly Narco test is an abbreviated form of "Narcotics of Officer". It is used to refer someone who with an agency like the D.E.A. in America, it is also sometimes Metaphorically used to refer to someone who is likely to talk to the police about criminal activities that is a snitch.

The terms Narco-Analysis was introduced in 1936 for the use of narcotics to induce a trance-like state wherein the person is subjected to various queries. The Narco-Analysis test is based on the principle that a person is able to lie using his imagination and under the influence of certain barbiturates, this capacity or imagination is blocked or neutralized by leading the person into a semi-conscious state. It becomes difficult for the person to lie and his answers would be restricted to facts he is aware of. The statements made by the accused are recorded on audio and video cassettes and the report of the experts is helpful in collecting evidence.

2. Hypnosis-

The subject which is put in a state of Hypnotism is not in a position to speak up on his own but can answer specific, simple questions after giving some suggestion. The answers are believed to be spontaneous as a semi-conscious person is unable to manipulate the answer. Wrong dose can send into the coma or even result in death. The rate of administration is controlled to drive the accused slowly into a hypnotic trance. The effect of the bio-molecules on the bio-activity of an individual is evident as the drug depresses the central nervous system, lowers blood pressure and slows the heart beat rate, putting the subject into a hypnotic trance resulting in a lack of inhibition. The subject is then interrogated by the investigating agencies in the presence of the doctors. The revelations made during this stage are recorded both in video and audio cassettes. The report prepared by the experts in what is used in the process of collecting evidence. This procedure is conducted in government

hospitals after a court order is passed instructing the doctors or hospital authorities to conduct the test. Personal consent of the subject is also required in hypnosis test.

3. P300 or the Brain Mapping Test –

P300 or the Brain Mapping test was developed and patented in the year 1995 by Neurologist –Dr. Lawrence A. Farwell, Director and Chief Scientist “Brain Wave Science”. IOWA In this method, called the “Brain Wave Finger Printing”, the accused is first interviewed and interrogated to find out whether he is concealing any information. Then sensors are attached to the subject’s head and the person is seated before a computer monitor. He is then shown certain images or made to hear certain sounds. The sensors monitors electrical activity in the brain and register P300 waves, which are generated only if the subject has connection with the stimulus that is picture or sound. The subject is not asked any questions.

Dr. Farwell has published that a MERMER (Memory and Encoding Related Multifaceted Electro Encephalographic Response) is initiated in the accused when his brain recognized noteworthy information pertaining to the crime. These stimuli are called the “target stimuli”, In a nutshell, Brain, Finger printing test matches information stored in the brain with information from the crime scene. Studies have shown that an innocent suspect’s brain not have stored or recorded certain information, which an actual perpetrator’s brain would have stored in USA, the FBI has been making use of “Brain Mapping Technique” to convict.

Polygraph or Lie Detection Test:

This test based on an assumption that there is an interaction between the mind and body and is conducted by various components or the sensors of a polygraph machine, which are attached to the body of the person who is interrogated by the expert. The machine records the blood pressure, pulse rate, respiration and muscle movements. Polygraph test is conducted in three phases – a pretest interview, chart recording and diagnosis. The examiner –a clinical or criminal psychologist, prepares a set of test questions depending upon the relevant information about the case provided by the investigating officer, such as criminal charges against the person and statements made by the suspect. The subject is questioned and the reactions are measured.

A baseline is established by asking questions whose answers the investigators know-Lying by a suspect is accompanied by specific, perceptible psychological and behavioral changes and the sensors and a wave pattern in the graph expose this. Deviation from the baseline is

taken as a sign of lie. All these reactions are corroborated test was among the first scientific tests to be used by the interrogators. It was Keeler who further refined the polygraph machine by adding a Psychogalvanometer to record the electrical resistance of the skin.

Other Kinds of Test:

A part from hypnosis, Narco-Analysis, P300 or Brain Mapping and Polygraph test or lie Detection test there are also other kinds of tests which are popularly used on the convict for extraction of truth convict, these are as –

1. Finger Print Test
2. Writing Detection
3. Visra Test
4. Ballistic test, and
5. Other Physical Instrument Detection test, etc.

Position of Criminal Investigation System and Scientific Technology in India:-

The India is a democratic and social welfare country and protection from crime to maintenance of Law of order is the first priority of every State which is in social interest and at the same time to maintain Human Dignity and Human Rights is also the priority of the State so the conflict of social interests and individual interests can be regulated by the Judiciary. It refers to the process of psychotherapy conducted on a subject by inducing a sleep like state with the aid of barbiturates or other drugs. In a spate of high profile cases, such as those of the Nithari killers and the Mumbai train blasts, suspects have been unmasked away to undergo an interview drugged with the barb borate Sodium Pentothal.

Under constitutional and other Laws:-

The main provision regarding crime investigation and trial in the Indian constitution is under Article 20(3). It deals with the privilege against self-incrimination. Article 20(3) says that “No person accused of any offence shall be compelled to be a witness against himself.” It provides a privilege against testimonial compulsion. In the case of **Ramchandra Ram Reddy vs. State of Maharashtra**¹. The apex court made a technical distinction between a “Statement” and a “Testimony” said that what is required to be made under compulsion by an accused is a statement. In this opinion undergoing tests targets certain framed questions which by expert after treatment that the person possesses certain knowledge about the crime and in relation to targeted question put before him. So no way it can be said that any stretch of imagination which end result is statement. At the most it can be call as information received or

taken out from witness. In this opinion they do not violate right- against self-incrimination given under Article 20(3) of Indian constitution.

The main provision regarding crime investigation and trial under the Article 20(3) of the Indian constitution. It deals with the privilege against in the Magna Carta. The privilege against "Self-incrimination is a fundamental canon of common Law criminal jurisprudence and Indian criminal jurisprudence is completely based on British criminal jurisprudence. The characteristic features of this principle are ---

1. The accused is presumed to be innocent,
2. That it is for the prosecution to establish his guilt.
3. That the accused need not to make any statement against his will.
4. These propositions emanate from an apprehension that if compulsory examination of an accused were to be permitted then force and torture may be used against him to entrap him into fatal contradictions. The privilege against self-incrimination thus enables the maintenance of Human Privacy and observance of civilized standards in the enforcement of Criminal Justice.

Article 20(3) which embody this privilege reads, "No person accused of any offence shall be compelled to be a witness against himself." Components of Article 20(3) are as ----

1. It is a right available to a person "accused of an offence."
2. It is a protection against such "Compulsion to be a witness".
3. It is a protection against such "compulsion" resulting in his giving Evidence against himself.

All the three ingredients must necessarily coexist before the protection of Article 20(3) can be claimed. If any of these ingredients is missing, Article 20(3) cannot be invoked.

The application of Narco-Analysis test involves the fundamental question pertaining to judicial matters and also to Human Rights. The legal position of applying this technique as an investigation aid raises genuine issues like encroachment of an individual's right liberties and freedom. Subjecting the accused to undergo the test, as has been done by the investigative agencies in India, is considered by many as a blatant violation of Article 20(3) of the Constitution. It also goes against the maxim "Nemo Tenetur se Ipsum Accusare" that is, "No man, not even the accused himself can be compelled to answer any question, which may tend to prove him guilty of a crime he has been accused of. If the confession from the accused is derived from any physical or moral compulsion (be it under hypotonic state of minds) it should be rejected by the court, The main issue thus is

the question of its admissibility as a scientific technique in investigation and its ultimate admissibility in court as Forensic Evidence.

Under Section 45 of the Indian Evidence Act, 1872 does allow experts opinions in certain cases:- "When the court has to form an opinion upon a point of a foreign Law, or of science, or art, or as to identity of handwriting or finger impression, the opinions upon that point or persons especially skilled in such foreign Laws, or of science, or art, or as to identify of handwriting or finger impression are relevant."

However this section is silent on other aspects of Forensic Evidence that can be admissible in court in criminal proceedings.

Section 161(2) of the criminal procedure code, 1973:-

Under Section 161(2) of the Criminal Procedure Code, 1973, the right against forced self-incrimination, widely known as the right to silence is enshrined in the Code of Criminal Procedure and the Indian Constitution. In the Code of Criminal Procedure, the legislature has guarded a Citizen's right against self -incrimination. Section 161(2) of the Code of Criminal Procedure states that "Every person is bound to answer truthfully all the question, put to him by (a police) officer, other than questions the answers to which, would have a tendency to expose that person to a Criminal charge, penalty or forfeiture."

It is well established that the Right to silence has been granted to the accused by virtue of the pronouncement in the case of **Nandini Sathpathy vs P. L. Dani**² no one can forcibly extract statements from the accused, who has the right to keep silent during the course of interrogation or investigation. By the administration of these tests, forcible instruction into one's mind is being restored to, there by nullifying the validity and legitimacy of the Rights to silence.

Moreover, the tests like Narco-Analysis are not considered very reliable. Studies done by various medical associations in the United States adhere to the view that truth serums do not induce truthful statements and subjects in such a condition of trance under the truth serum may give false or misleading answers.

Judicial Trend towards Scientific Evidence:-

In many cases the Supreme Court found that Narco-Analysis and other scientific tests are violated individual's right to "Privacy and amounted to cruel, inhuman or degrading treatment." Article 21 of the

Indian constitution, protects the right to life and personal liberty, which has been broadly interpreted to include various substantive due process protections, including the right to privacy, and the right to be free from torture and cruel, inhuman or degrading treatment these are as:-

1. **In M.P. Sharma Vs. Satish Chandra**³ -There was a issue that Article 20(3) provides right to the person witness in courtroom and not beyond that and same issue has been raised by the respondent in the Kathi kalu Oghad case which apex court clearly observed and held that since Article 20(3) has words “to be a witness” and not “to appear as a witness” so the protection is extended to compelled evidence obtained even outside of courtroom. The privilege against self-incrimination enables the maintenance of human privacy and right to silence pronounced by the Supreme Court.
2. **In the case of Nandini Satpathy Vs. P. L. Dani**⁴ Supreme court said that “No one can extract statement from the accused, who has right to silence during the course of interrogation investigation”. It was also claimed that the right to keep silence is by the Article 20(3) of the Constitution of India and section 161(2) of Criminal Procedure Code and same upheld by the apex court.
3. **In the case of ram Jawaya Kapoor**, Court clearly said that the executive power can't intrude on Constitutional rights and liberty or any other rights of the person and if it is related with fundamental rights then must struck down as unconstitutional.

However, there is an argument from the investigating agencies that the Narco analysis test is used as an aid for collecting evidence and helps the investigation so it cannot amount to testimonial compulsion as given under Article 20(3).

1. **In the case of Dinesh Dalmia Vs. State** ⁵,the Madras High Court while hearing the case held that the scientific tests such as polygraph, Brain Mapping and Narco analysis conducted on accused to bring out truth would not amount to braking his silence by force.
2. **In case of Selvi vs State of Karnataka**⁶, It was held by the Supreme Court of India that the result of the test cannot be admitted as an evidence even though consented by the accused because there is no conscious control is being exercised by the subject during the course of test but the court left one option that if the subject consented for the test and then any material or information discovered that can be admitted under section 27 of the Indian Evidence Act, 1872. Further it was also held that according to Section 25 of Evidence Act “Confession made before any police officer are not admissible as evidence before the court.” Thus the court is of the

view that the statements made by the subject during custody are not admissible as evidence unless same has to be cross examined or judicially scrutinized.

3. **In the case of Rojo George Vs. Deputy Superintendent of Police**⁷, while allowing the Narco analysis test court is of the opinion that in present day the criminals started to use very sophisticated and modern techniques for committing the crime. So the conventional method of investigation and questioning to the criminals will not be successful for solution and there is need to utilize some new techniques such as polygraph, brain mapping and narco analysis. Court also said that when such techniques used in the presence of expert then it can't be raised that the investigating agencies violated the fundamental human rights of any citizen o India.
4. **In case of Santokben Sharmabhai Jadeja Vv. State of Gujrat**⁸, the court while upholding the order for conduction of Narco Analysis test on the accused Santokben Sharmabhai Jadeja, it was observed that when after exhausting all the possible alternatives there was no possibility to find out truth or nab the criminals and it is found by the prosecuting agency that there is no further headway of investigation, they are absolutely in dark then it is necessity of such tests. On the basis of this revelation if investigating of crime then there will not be any violation of Article 20(3) of constitution of India.
5. **In case of Dharampall Vs. State**⁹ it was clearly said by the Apex court that the criminal justice system cannot act properly if the person living in the society would not be cooperative so it is the duty of every person to assist the state in bringing criminal justice and detecting the crime. It must be Known that no one can withhold criminal information and escape from responsibility by avoiding such information in the name of right to privacy which itself is not an absolute right.
6. **State of Gujrat Vs. Anirudh Singh**¹⁰ the Supreme Court of India held that, it is statutory duty of every witness who has knowledge of commission crime to assist the state in giving evidence and it seems justified that if a person is not willing to give information which is necessary for investigation them adverse impression must be taken against them and no Article 20(3) has stop to do this. In this way Supreme Court harmonized between protection given under Constitution and Scientific methods.

CONCLUSION:-

As the society is changing very fast, the crime pattern is also rapidly changing. In the present scenario, where the professional trained criminals started replacing the criminal with traditional investigation methods seems to be very difficult. In this situation it is needed that the investigation agencies to update the process according to the social pattern and adopting scientific technique in the investigation process.

Narco-Analysis, Lie detection test, Brain Mapping, Polygraphy test and P300 test are boon a modern Scientific test but they have been declared unconstitutional and void by the honorable Supreme Court in the land mark judgment of Smt.Selvi vs.State of Karnatka¹¹ According to National Human Rights Commission these tests have greater negative effects on the persons which are subjected to it as there is a great deterioration of method as well as physical health of the person, and if these tests are used compulsory against the accused person it violets Article 20(3) of the constitution and the crucial evidence which comes after conducting of these test is also not admissible before court of Law.

Article 20(3) of the Indian constitution says “No person accused of any offence shall be compelled to be witness against himself,” Which is also known as “Doctrine of self-incrimination”, which says that no accused person shall be compelled to give evidence against himself, it provide immunity to the accused to protect himself from incrimination.

There have been cases in which Narco-Analysis was done like in Aarushi Talwar murder case and it has also been used in Ajmal Kasaab, but for it you have to take special permission of the Court and there are some important guidelines which are given by National Human Rights commission about the conducting of these tests and those should be followed strictly.

The results of a scientific test can be used to obtain further Evidence in a police investigation example if a person under Narco-confession to a murder case and provides location of a murder weapon, and the police in their search find the murder weapon, then the murder weapon can be admissible as evidence: however if the police do not find the murder weapon, it cannot submit the confession of knowledge of a murder weapon under Narco to court, as that is inadmissible 24 January, 2016 the Court can never say. “Based on this Narco-Analysis, Polygraph test, we are-If it is done with the consent of

the accused, then it is admissible as Evidence under section 24 of the Evidence Act.

In the end the Supreme Court absolutely denied the use of Scientific test like Narco-Analysis test, various Committees and Commission have issued guidelines for the use of these Scientific methods. On the whole Indian judiciary has consented conditional use of these tests for extracting truth, Infact, some of the Laws relating to criminal justice system need amendments so that scientific methods of investigation can become part of the Laws thereby they can be utilized for the benefits of the society at large and to have a crime free society.

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