

( LL.M. PROGRAM 2020-2021 )

**D I S S E R T A T I O N**

*In the subject of* **EXPERT EVIDENCE**

*on the topic of*

**“EVOLVING TREND *of* EXPERT EVIDENCE THROUGH  
FORENSIC PSYCHOLOGICAL TECHNIQUES?”**

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**I N D E X**  
**( T A B L E O F C O N T E N T )**

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## CHAPTER - I

### INTRODUCTION

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1. Criminology is the study of science, and the criminal justice administration seeks to bring science to the courts through technological advancements. With the growth of science and technology, the amount of scientific expert evidence has been constantly expanding. Recent criminal investigations and trials mostly focus on the science employed by specialists to gather evidence instead of oral evidence. Scientific evidence thus reached before the Court of law by technical methods leads to a significant question about its admissibility. During the trial the expert testimony takes the shape of a view that concerns a scientific problem. It obliges the Court of Justice to thoroughly examine the opinion of the experts and science and find out on what it was founded. The Court must assess the scientific evidence and decide whether, based on the admissibility threshold established by law, the expert's opinion was reached correctly. Forensic psychology has a long history and is an applied area of crime detection in psychology. The technical developments in recent decades have changed the mentality of the perpetrator, which require progress in technology for crime detection. In order to track the psychological elements of suspects and accused engaged in the crime, investigative areas have been extended. The Forensic psychology is now essential to the administration of criminal justice. Although it is widely used in pretrial, trial, and post-trial phases, its major contribution is pre-

trial research. This is effective in determining the validity of the assertions of the test subject to the method applied for testing, and directly affects investigative efficiency and equity in criminal trials. These tactics are mostly utilised to ascertain the truth of the incident of the offence in the interrogations of suspects, victims and witnesses. This is mainly due to the advent of objective tests such as polygraph, narco-analysis, voice-spectrographic, LVA, brain-mapping tests, etc. That such tactics are utilised in the investigation to find out the truth, which eventually helps the investigation. Those studies are contained in a field of legal psychology that deals with forensic psychological procedures for the validation of the truth although they have in the most been created by forensic psychology and are used in law. Forensic analysis adds to a missing link and enhances the weak investigative chain and it is necessary to bring forensic science into the picture. Experts' opinions are usually acceptable as proof under the provisions of section 45 of the IEA. In many situations when technical issues are involved, this evidence generally plays an essential role and thus specialists who are competent and well-equipped; explains their stance in this sphere. In the present study, the aim is to investigate how specialists in the Forensic Science Laboratories do scientific tests based on psychology knowledge used in the course of the study and how far the outcome can be testified before the court as significant evidence that it considered admissible and evidence worth.

## STATEMENT OF THE PROBLEM

2. The scientific unification of the criminal justice system has been an unavoidable part of criminal administration for days now and the hour has become necessary to assimilate the forensic psychological techniques under judicial process to either bring culprit in court or to connect the chain of crime. The difficulty with this whole method is, however, both its finality and its acceptability. There are many other common concerns that have been addressed: a lack of training, a lack of standardisation, empirical research and research which influence fair trial rights during the pre-trial stage. A research must thus assess how far forensic psychological technologies are assimilated as a tool in criminal enquiry. The most modern forensic psychological methods and the legal conditions for conducting the tests are not provided in the Criminal Major Act precisely under the procedural code, 1973, under police manual and vide numerous judicial pronouncements, including *Selvi*<sup>1</sup>, which do not provide a binding methodology for the investigating officers, judicial officers or other enforcement agencies including FSL. The techniques are currently governed by the Selvi guidelines. It will not be sufficient to have just guidelines without legislative support through legislation. Therefore, it is necessary to analyse the investigative and evidence usage of the procedures as well as its admissibility and evidentiary value in the eyes of law.

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<sup>1</sup> Selvi v. State of Karnataka, (2010) 7 SCC 263

### OBJECTIVES OF THE STUDY

3. The objectives of the present study are pointed out as follows:
- A.** To research about the application of Forensic Psychological Techniques and its methods.
  - B.** To evaluate admissibility and maintainability of Expert Evidence during the Trial for the techniques applied during the course of investigation.
  - C.** To find out the numerical data from Forensic Science Laboratory at Gandhinagar with respect to Psychological Techniques applied from the year 2005 to 2020 in the State of Gujarat.
  - D.** To examine the *prevailing effect* of expert evidence over substantive evidence.
  - E.** To apprise the evolving trends in expert evidences through scientific techniques.

### SIGNIFICANCE OF THE STUDY

4. The question which requires deliberation in present research is to discuss, evaluate, analyse, examine and apprise the involuntary administration of Forensic Psychological Techniques, testimony being self-incriminating in nature under constitution in the light of scientific and technological developments, evidentiary and admissibility value of expert evidence recorded during the Trial as well as usefulness of psychological aids carried while conducting the investigation. Forensic psychology in many respects is helpful, however the application, admission and retention of expert evidence by means of psychological forensic techniques have limited acceptance of meaningful evidence provided during the Trial.

### RESEARCH QUESTIONS / HYPOTHESIS

5. The research questions framed to study the topic in its entirety the following hypothesis are framed.
- A.** Whether collection of evidence based on Forensic Psychological Techniques affect rights of the accused?
  - B.** Whether results derived from involuntary administration of Forensic Psychological Techniques amount to testimonial compulsion?
  - C.** Whether Forensic Psychological Evidence satisfies the admissibility and reliability criteria ensuring right to fair trial?
  - D.** Whether Forensic Psychological Techniques applied by Investigating Agency leads to recognise and channelise the crime?
  - E.** Whether evidence based on Forensic Psychological Techniques falls within the evidentiary barriers as to admission of relevant evidence?

### SCOPE OF THE STUDY

6. Although the research conducted earlier is centred on the psychological and social component of criminal conduct on forensic psychological techniques however the current research has been focused on evidence, expert opinion and use of evidence in Indian criminal courts during the course of trial upon those techniques applied during the course of investigation. I had proposed and prepared to conduct a variety of questionnaires and empirical research in the institutions specified below during the course of the research, however amid covid-19 the said empirical research could not be carried out although various RTI have been filed but yet there is no response from the FSL Gandhinagar.

## RESEARCH METHODOLOGY

7. The study is purely doctrinal in nature which is also based on secondary sources of legal data by utilizing various annotations, reference books, journals, articles as well as wide usage of precedents to distinguish the trend adopted in judicial decisions. This research is purely based on the resources from the library and online database. The research is a combination of three legal research methodologies. **1.** Descriptive **2.** Analytical *and* **3.** Qualitative Research. The researcher aimed to personally visit the FSL at Gandhinagar to collect information from the forensic experts through interview. The researcher intended to visit the office of ACB, at Shahibaug, to the Headquarter of the ATS Gujarat, to the office of CBI at Gandhinagar, to the office of NCB, to the office of State CID Crime to collect the information personally from police officers through interview method. That the information was intended to be collected personally among police officers to ascertain whether the techniques aids and lead in criminal investigation. That researcher intends to avail the remedies under the Right to Information Act seeking numerical data from the FSL, Gandhinagar with respect to Psychological Techniques applied from the period 2005 to 2020. However; amid covid 19 and precisely amid 2<sup>nd</sup> wave the interviews and the data collection could not be carried out but RTIs have been filed seeking various data twice but yet there is no response from the FSL Gandhinagar.



## CHAPTER – II

### EXPERT EVIDENCE- TYPES, RELEVANCY AND ADMISSIBILITY

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8. The essential principal of the law on evidence is that the VIEWS are inadmissible and unacceptable. It has to travel through the test of its standard. The very principle is founded on the "Best Evidence Rule" idea. Fundamental notion of the evidence law is to adduce finest evidence in court and the better proof means the proof obtained from a direct source meaning thereby an evidence by the eye witness is an evidence from direct source. Such proof is acceptable and admissible. In specifically the provisions contained under section 45 to 51 refers to law relating to expert evidence, and it is confined to their explanation. The basic norm is that the opinion of individuals or witness's beliefs before the Court is not admissible. The law of expert evidence has nonetheless been developed over time with fast technological progress and via court judgments. The witnesses usually bear witness to the facts in their immediate knowledge and leave it to the court, based on these factual facts; to express opinions, judgments or conclusions. Witnesses are not usually to tell court what they think or believed to be; therefore, their views are irrelevant in a legal course, but opinions of people with special skills, knowledge and practice are accepted as evidence in certain specific matters requiring special competence in the subject concerned where court has no knowledge or skill and their testimonies recorded speaks relevancy.

9. In every instance, an expert opinion, whether criminal or civil, is not necessary. Generally speaking, expert views are accepted if a problem involves a subject that only particular training and understanding can be achieved<sup>2</sup>. The topic should be such that specialist expertise is required and only then may expert evidence be sought. Furthermore, unless requested upon by the investigating Officer a specialist cannot provide his opinion suo moto. The opinions of third individuals, who are usually referred to as experts in our daily practise as a matter of fact, are relevant under Chapter II, from provisions under S.45 to 51 of the evidence act. These clauses are unique in nature to the general rule that only facts that are known to a witness must be proved. The exception is founded on the premise under these provisions is that, without help from individuals who have gained particular skilled knowledge and expertise, the court cannot provide an opinion on topics that are technically complex and professionally erudite. Now therefore, the **inquiry is raised as to who is Expert?** The provisions contained in S.45 describes an expert a specialist in a certain area. An expert is a person whose specific skills and know-how pertain to a certain aspect. A person who has devoted time in studying and has gained skill in a particular field of learning; this is particularly qualified in the areas under which his opinion is called for and is material too. The provision is silent as to particular qualification, norms or skill qualifying a person

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<sup>2</sup> Law Society v. Fertilizers and Chemicals Travancore Ltd., 1994 SCC OnLine Ker 59

as an expert. In so far as expertise is required, all individuals who need to have a specific understanding of the subject, are experts. It is the judge who decides if anybody can demonstrate his view in the case as opinion<sup>3</sup> which is offered is adequate to enable him to be an expert or not.<sup>4</sup> In Ramesh Chandra Agrawal v. Regency Hospital Limited<sup>5</sup> SC categorically opined as to opinion evidence can be accepted only when it is shown that the particular subject in question was specially studied by the individual **or** has acquired special experience and expertise therein **or** has been skilled and has adequate knowledge of issue in question. To demonstrate that a witness is the witness of an expert, it must be proved that a particular study has been made or gained therefrom a special experience. If comprehensible, compelling and tested expert opinion becomes factor and is typically an essential element to take into account together with other evidence. The trustworthiness of a witness hinge on the grounds for his findings and on the facts and materials provided on conclusions are required to brought correct available resources and findings on the issue which will lead him to conclude that, even if not an expert, the court may, by its own observation, make its own decision. However, the test consists of seeing whether the witness is experienced enough to give opinion on the subject issue having

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<sup>3</sup> An estimate, a belief or evaluation, believed likely, an assessment with no evidence, an official explanation of the reasons for the judgement and a formal statement of expert guidance on a specific subject or topic.

<sup>4</sup> Choudhary R.N, Expert Evidence, Oriental Publishing Company, 2<sup>nd</sup> Edition, 2004.

<sup>5</sup> (2009) 9 SCC 709

acquired the special skill and knowledge the issue in question and his credit is contested by the cross-examination or by other expert evidence, or by demonstrating that in earlier cases or in one of the ways permitted to under section 146 to 153 or under Section 155 of the Evidence Act; witness' credit in general can be questioned or revoked. The expert is not called to express his own judgment and render conclusiveness of accused being guilty or innocent. When the expert is called by the prosecution or by the motion of the court to depose expert evidence, the expert does not have to act as a lawyer nor as a Judge. The expert may give his view on the culpability of the accused if the judge accepts it as it is, by passing the verdict or may reject also because an expert opinion under section 45 is not a definitive piece of evidence or conclusive proof of the accused's culpability, but only a relevant fact that is important to deciding the fact in issue which is provided precisely under section 46 of the Evidence Act. The expertise is now necessary in numerous areas like identification of fingerprint, handwriting, footprints, DNA, time of death, age, cause of death, possibility of weapons being used, injury, health and other scientific or trade issues. Thus, **inquiry is raised as what are the types of Experts?**

- 10.** Under S.45 of the Act, when court needs to form an opinion on the subjects of (1) **foreign law** (2) **science** (3) **art** (4) **handwriting** (5) **finger impressions**, the opinion of a skilled person is called for, later under Section 45-A, which was inserted in 2009; the

opinion of a (6) **examiner of electronic evidence** can also be called for as Expert opinion; Other sorts of expert testimony considered in addition to these statutory expert opinions are (7) **Medical Expert** (8) **Ballistic Expert** (9) **Type writer Expert**<sup>6</sup>. The examiner of psychological tests such as Lie Detector Tests, Narco Tests, Brain Mapping, LVA, Voice Spectrography the (10) **Psychologist or Forensic Psychology Expert** is the sort of expert who could be covered under the head 'Science and Art'. Before discussing the admissibility or the evidentiary value of expert evidence or opinion before the Court of Law, let us first consider what the difference between an expert witness and a regular witness is and how they vary *inter se*.

EXPERT WITNESS	USUAL WITNESS
Stretches opinion / evidence on specific subject where court is not expert and needs opinion.	Gives evidence/ speaks facts linking to personal knowledge of the occurrence or issue.
Advice-giving in character.	Advice/ opinion is immaterial.
Gives view on the foundation of experience, unusual data and expertise in the subject.	Tells what he saw, heard or observed true facts about the occurrence.
Not a conclusive evidence needs corroboration via independent evidence.	Conclusive / substantial piece of evidence upon which conviction can arrived at.

<sup>6</sup> State v. S.J. Choudhary, (1996) 2 SCC 428

**11.** The question which requires deliberation is and therefore, the inquiry is raised as **How far the expert opinion is relevant and admissible?** Only when the expert is examined as a witness in the court will an expert opinion become admissible. An expert's report is not admitted unless the expert provides grounds for opinion and his evidence is questioned by defense under cross-examination. But the statute under section 293 of the Code of Criminal Procedure, 1973 has exempted some scientific experts from the assessment to limit the delays and costs associated with getting expert support and therefore the report of expert or scientific analyst produced before the court by investigator may also not require formal proof under section 294 of the Code, 1973. However, an expert's opinion must support the facts and circumstances of the case in question. If the opinion contradicts an unchallenged eyewitness or proof then expert evidence will prevail otherwise formal and corroborative proof is mandate to accept the opinion as evidence admissible. There are two forms of expert proof are Opinion Proof and Data Proof. Data Proof typically gives greater weightage and precedence over opinion proof. In any event, though, only expert evidence cannot be relied on. If the Judge relies fully on the judgement or opinion of the expert, the case will be weaker and will be set aside by the appellate court. That is because a man is still not seen as a first-hand witness, though an expert in his area. He only adduces what may or might have occurred or incurred. Expert is not an immediate testigo and secondly his proof is not conclusive

because, such proof requires primary proof and cannot be survived on its own. In instances when expert opinions are considered, primary evidence should be available and supported by the expert view. If the judgement of the expert's conflicts with an unquestionable eyewitness or documentary evidence, direct evidence will not be taken into account. Expert opinions are solely utilised to help the judge to establish an autonomous judgement or to form an opinion where judge has no skills<sup>7</sup>. Another reason behind weaker admissibility of expert opinion is Section 46 of the evidence act. The expert opinion is only relevant when they are supported through relevant facts if facts are not relevant but opinion supports such facts then such irrelevant facts become relevant but again, such irrelevant facts became relevant needs corroboration of independent evidence and then only it becomes admissible. Section 45 is thus interpreted in conjunction with Section 46 as the opinion provided under Section 45 is directly linked to Section 46. The Section 46 reads as under:

**“Section 46: Facts bearing upon opinions of experts-**  
*Facts not otherwise relevant, are relevant if they support or are inconsistent with the opinions of experts, when such opinions are relevant.”*

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<sup>7</sup> Ratanlal & Dhirajlal, The Law of Evidence, 25<sup>th</sup> Edition, Lexis Nexis, (2017)

**12.** When subject of the proceedings is of a kind when inexpert individual may not be able to make an accurate assessment; the expert witnesses who possess unusual ability is called for. This is the way to induct knowledge so far that study is required to acquire a good understanding of its nature.<sup>8</sup> However, Expert opinion cannot be considered as conclusive proof and the same renders as of no use to the court in interpreting law on evidence<sup>9</sup> and in all other cases witnesses must speak only of facts and not of opinion or inferences<sup>10</sup> and therefore, expert is not permitted to act as judge and based on their findings the court has to measure their view and choose finally.<sup>11</sup> At the end credibility and competence of expert is material question. The Supreme Court has taken a more stringent position on the standard of evidence based on opinion of an expert given that direct proof is available for appreciation during the course of trial and the opinion rendered remains as weak evidence compared to direct evidence available and cannot be exclusively relied upon without supporting independent evidence merely on the basis of expert opinion conviction cannot be attain and without corroboration of independent evidence; the sole basis is rejected. Summary of admissibility and evidentiary value of various expert opinions in accordance with the Supreme Court rulings are cited as follow:

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<sup>8</sup> Ratanlal & Dhirajlal, The Law of Evidence, 19<sup>th</sup> Edition, Wadhwa & Co, (1997)

<sup>9</sup> Forest Range officer v. P. Mohammed Ali, (1993) Supp 3 SCC 627

<sup>10</sup> Babuli v. State of Orissa, (1974) 3 SCC 562

<sup>11</sup> Law Society of India v. Fertilizers & Chemicals Ltd., 1994 SCC OnLine Ker 59



<p>Medical Expert Opinion</p>	<p><u>Prem v. Daula</u><sup>12</sup></p> <p>In this case depth of injury found was more than the length of Ranpi an alleged weapon was used to causing the injury. The high court acquitted the accused on account that the opinion of medical expert was inconsistency with the injury caused. Wherein, medical expert opined that injury in question could not be caused by such ranpi. Thus, supreme court had an occasion to discuss a question a weather testimony of eye witness who deposed that the injury in question was caused by ranpi be discarded in view of the opinion of medical expert. The SC reversed the acquittal and convicted accused by holding that evidence of eye witness is impeachable, further the same shall be preferred over the medical opinion and therefore the opinion evidence of the medical expert cannot nullify the evidence of the eye witness.</p> <hr/> <p><u>Tanviben Pankajkumar Divetia v. State of Gujarat</u><sup>13</sup></p> <p>In this case SC had an occasion to decide the conflict of the expert opinion of two doctors. One being having examined the injured and another having been carried out the post-mortem examination. In the present case, the accused had sustained the multiple injuries on head. The doctor who has carried inspection; the defense pleaded that such injury is not self-inflicted. Further, infant aged 6 months also suffered injuries and the medical expert gave an opinion that the abrasion agonized by the infant was conceivable by contact with a blunt object and could be caused by a fall and the diffused swelling found on an infant reflected the manifestation of some internal injury. The SC after careful consideration of</p>
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<sup>12</sup> (1997) 9 SCC 754

<sup>13</sup> (1997) 7 SCC 156

expert opinion and the evidences adduced regarding the injury suffered held that such injury suffered by the accused and the infant was not self-inflicted. With respect to the time of death, the SC held that *“opinion of the medical expert holding post-mortem examination must be preferred against the expert opinion of the doctor who has deposed his opinion on the basis of post – mortem report and notes thereon and therefore held that the opinion of the doctor who actually examined the injured as well as who conducted the post-mortem examination must be relied and preferred rather than the expert opinion who gives his opinion only on the basis of injury report, x-ray report, post-mortem report etc”*.

Solanki Chimanbhai Ukabhai v. State of Gujarat<sup>14</sup>

The SC examined the admissibility and evidentiary value of eye witness vis-a-vis medical expert witness and held that the value of medical opinion is only corroborative. It proves that the injuries could have been caused in the manner alleged and nothing more. However, the defense can use the medical opinion to prove that, the injuries could not possibly have been caused in the manner alleged and thereby discredit the eye witnesses, unless however, medical evidence in its turn goes far away that it completely rules out all possibilities whatsoever of injuries taking place in the manner alleged by eye-witness. The testimony of the eye witnesses cannot be thrown out on the ground of alleged inconsistency between testimony of eye witness and medical expert evidence and therefore, the testimony of eye witness must be relied upon and opinion of medical expert might contradict the eye witness testimony but such contradiction will have of not benefit at the instance of accused during the trial for availing acquittal.

<sup>14</sup> (1983) 2 SCC 174

Mallikarjun v. State of Karnataka<sup>15</sup>

SC summarised on principles of medical evidence vis-a-vis ocular evidence as well as discussed when medical evidence may cast doubt on ocular testimony. Wherein the SC opined that the expert is not a witness of fact. Opinionative evidence of the doctor is primarily an evidence of opinion and not of fact. It is only a corroborative piece of evidence as to the possibility that the injuries could have been caused in the manner alleged by the prosecution unless the medical evidence rules out such possibility of injury being caused in the manner alleged by the prosecution version, the testimony of the eye witness cannot be doubted on the ground of its consistency with medical evidence.

Javed Abdul Rajjaq Shaikh v. The state of Maharashtra<sup>16</sup>

SC had an occasion to decide the contingency as to whether the injuries found in the inquest report (*panchanama*) not being noticed during the post-mortem examination would lead to benefit of doubt to accused or not. The SC held that *“it is undoubtedly accepted that the medical doctor who has carried out the post- mortem examination knows exactly what medical injuries actually are and ordinarily in case of consistency between the inquest panchanama and post-mortem report, the post-mortem report and the doctor justifying and deposing post-mortem report should prevail. Since, in this case the nature of injury noticed as explained by the doctor unerringly point to the death being caused by throttling as opined by the doctor may not turn on the injuries which are alleged to have been noted or noticed in the inquest panchnama not being noted in the post-mortem note.”*

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<sup>15</sup> (2019) 8 SCC 359

<sup>16</sup> (2019) 10 SCC 778

<p>Fingerprint Expert opinion</p>	<p><a href="#">Hari Om v. The State of Utter Pradesh</a>.<sup>17</sup></p> <p>The issue which arose before the SC was that whether in prosecution under section 396 of IPC liability of accused persons could be fastened with the help of only finger print expert's opinion. The presence of finger prints at scene of crime not material when there was no clarity in the process adopted by the investigator for lifting finger prints from scene of crime and further analysis thereafter. Person having taken the photographs which were sent to the office of Director of Fingerprints Bureau was not even examined and therefore, the procedure adopted for taking such photograph and sending it to the FSL is not trusted and tested one who actually could have thrown light on these vital issues even the glasses from where finger prints photographs were taken were not made available for appropriate analysis and hence, confidence cannot be sited on expert report that the lifted finger prints from the glasses matched with the sample finger prints of accused. The SC reiterated that <i>"the opinion of finger print expert is not substantive evidence and such opinion can only be used to corroborate some items of substantive evidence which are otherwise on record however, in certain facts of the case the evidence given by fingerprint expert need not necessarily be corroborated at par but at the same time the court must satisfy itself as to the value of the evidence of the expert in the same way and manner as it must satisfy itself of the value of other independent evidences."</i></p>
<p>Handwriting Expert opinion</p>	<p><a href="#">Magan Bihari Lal v. The State of Punjab</a>.<sup>18</sup></p> <p>SC opined that the hand writing expert opinion must always be received with great caution and perhaps none so with more caution than the opinion of the handwriting expert.</p>

<sup>17</sup> (2021) 4 SCC 345

<sup>18</sup> (1977) 2 SCC 210

There is profusion of precedential which hold that it is unsafe to base a conviction solely on expert opinion without substantial corroboration. The SC further held that *“this rule has been universally acted upon and it has almost become a rule of law. This type of expert evidence being opinion evidence, is by its very nature, weak and infirm and cannot of itself form the basis for a conviction. However, the same can be relied upon only supported by other iota of internal and external evidences. Thus, it does not become conclusive and cannot take place of substantive evidence.”*

[Murari Lal v. State of M.P.](#)<sup>19</sup>

Later on, the SC in this case held that the evidence of handwriting expert need not be invariably corroborated. It is for court to decide whether to accept such uncorroborated evidence or not and court should approach the question cautiously and after the examining the reasoning rendered by the expert opinion should reach to its conclusion. Even where there is no expert the court has power to compare the writing itself and decide the matter on its merits. When expertise examines the expert deposes and not decides. The duty of expert is to furnish the judge with the necessary scientific criteria for testing accuracy of his conclusion. So as to enable the judge to form his own independent judgement by the application of those criteria to the facts proved in the evidence. Moreover, Section 73 of the Evidence act enjoins the court to compare the disputed writing itself and this duty cannot be avoided by recourse to the statement that the court is no expert, where there are expert opinions. They will only aid the courts; where there is none, the court will have to seek guidance from authoritative, textbooks and court's own experience and knowledge.

<sup>19</sup> (1980) 1 SCC 704

	<p><u><a href="#">Chennadi Jalapathi Reddy v. Baddam Pratapa Reddy</a></u><sup>20</sup></p> <p>While reiterating above dictum, the SC recently held that it may not to be solely rely upon such weak type of expert evidence which is not substantive in nature and court shall rely upon independent, corroborative evidence as general rule of prudence since expert evidence is not conclusive proof. It is necessary to send all relevant documents for examination to handwriting expert and any omission to send undisputed document does undermine handwriting experts' report. Since section 46 of the evidence act expressly makes opinion evidence very much open for challenge on facts.</p>
<p>Typewriter Expert opinion</p>	<p><u><a href="#">State v. S.J. Choudhary</a></u><sup>21</sup></p> <p>In a unique interpretation of the expression "science or art" under Section 45, the SC gave wider import to the term by including typewriter expert as expert witness under section 45 by holding that the terms 'science and art' has to be construed widely to include within its ambit, the opinion of an expert in each branch of these subjects whenever, the court has to form an opinion upon a point relating to any aspect of science and art. It is clear from the meaning of word science that the skill and techniques of the study of peculiar features of a typewriter and the comparison of the disputed typewriting with the admitted typewriting on a particular type writer to determine, weather the disputed typewriting was done on the same typewriter is based on a scientific study of the two typewriting with a reference to the peculiarities therein and the opinion form by an expert is based on recognised principles regulating the scientific studies. And therefore, such and opinion is the opinion of the experts in</p>

<sup>20</sup> (2019) 14 SCC 220

<sup>21</sup> (1996) 2 SCC 428

	<p>branch of science which is admissible in evidence under section 45. Hence, necessarily it is understood to include type writing as well under the Performa of science.</p>
<p>Ballistic Expert Opinion</p>	<p><u>Kalua v. State of U.P.</u><sup>22</sup></p> <p>A person was murdered by shooting with the help of a country made pistol. A cartridge case was found near the coat of the deceased and a country made pistol was produced by the accused. The opinion of the Ballistics expert was sorted as to whether the cartridge found from the crime scene was fired from the country made pistol or not? Ballistics Expert opined that the cartridge recovered from the scene of crime was fired from the recovered country made pistol and no other firearm. -The Apex court highlighted the importance of Ballistics expert opinion. It would be insufficient to convict the appellant of the crime without help of the circumstantial evidence based on the testimony of the eyewitnesses and IO. In a criminal investigation there are several uses of ballistics. In the goal of finding multiple pieces of information, bullets fired at scene of crime are investigated utilising fundamental principles of legal research. Real bullets can tell which sort of weapon the offender was using and if the firearms are linked. The damage caused to a bullet by hitting a hard surface can assist to estimate the size and angle of fire. Gunshot residues on the hands of the suspect or any other body part can be explored to determine whether the suspect discharged the gun and such information allows investigator to detect the shooter's identity. If bullets are not retrieved from the crime scene, particulates around the gunshot or the injury might nevertheless cause investigators to determine what kind and hence the type of gun was used in the criminal conduct.</p>

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<sup>22</sup> 1957 SCR 187

Rajesh v. State of Haryana<sup>23</sup>

In this case contrary view to the above decision is taken, the testimonies of eye witnesses were not believable and reliable since those eye witnesses were related witnesses being father and brother of deceased as well as test of identification parade was not carried out. In this case, the death was due to injuries caused by a lethal weapon and therefore, SC held that *“it was a duty of a prosecution to prove by the expert evidence it was likely or at least possible for the injuries to have been caused with which and in the manner which they are alleged have been caused. However, there is no inflexible rule that the prosecution could succeed in proving the charge of murder alleged to have been caused with a lethal weapon only if an expertise examine. Contrarily the evidence of a ballistic expert would assume significance where direct evidence is not satisfactory is of an interested witness or where the nature of injury is requires expert’s corroboration. Therefore, non-examination of the ballistic expert held fatal in the present case, resulting in benefit of doubt given to the accused to gain acquittal. “*

Mohan Singh v. The State of Punjab<sup>24</sup>

In this case, the accused shot the deceased causing injury in the chest. The death of that person and injuries to another victim was caused by the same gunfire and conclusion on basis of dimensions of injuries as gathered from their descriptions and photographs held to be an acceptable. Since the expert did not have an opportunity to seen the injuries. Therefore, even a small difference in measurements are vitals and SC held that the sole expert opinion is unacceptable.

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<sup>23</sup> (2021) 1 SCC 118

<sup>24</sup> (1975) 4 SCC 254



DNA opinion	<p><u>Dharam Deo Yadav v. The State of Utter Pradesh</u><sup>25</sup></p> <p>In this case, the SC decided the admissibility value of ocular evidence <i>versus</i> scientific forensic evidence, wherein both the evidences were compared by exploring the meaning of science and thus it was concluded that so far as, forensic evidence is concern, there is always comparative accuracy and lack of such infirmities in scientific and forensic evidence. Therefore, SC clarified that scientific forensic may not be the shortest taste but there is a necessity for promoting the scientific evidence interest of criminal justice system. Since, in a case based on circumstantial evidence, scientific and technical evidence has pivotal role. Also, the SC held that <u>“the change in contamination, degradation and damaged of samples taken for DNA test &amp; thereby challenge the authenticity of the DNA test. Since, the expert having conducted DNA test and his expertise having being not questioned, the reports of the expert are solely reliable and acceptable under the evidence. Thus, in absence of even non-examination of examiner of DNA test the defence cannot raise vital objection on the admissibility and evidentially value of DNA reports and test.”</u></p>
Serologist opinion	<p><u>Keshavlal v. State of M.P.</u><sup>26</sup></p> <p>In this case, the report of serologist was not available on record of the trial yet the report of chemical analyser clearly unequivocally shown that the cloths of the appellant and the weapon of offence were stained human blood and therefore non ascertained of the blood group cannot be made of basis to discard the evidence of witnesses who otherwise inspire the confidence of the court and are believed by it. Therefore, unavailability of serologist report and non- examination of serologist is not fatal at all.</p>

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<sup>25</sup> (2014) 5 SCC 509

<sup>26</sup> (2002) 3 SCC 254

**13.** From the above discussion; I, may so infer that the court avails expert evidence primarily in scientific issues when an individual with great expertise is permitted to express his or her view in evidence and in actuality. It is also asked to attest to the facts and details that lead to this view. In order to offer evidence in the court, a witness providing expert testimony must be competent. Anyone unable to grasp the essence of the issue raised by the court shall not be qualified to provide an opinion on evidence and facts. As noted above, expert evidence generally refers to medicine linked to one's death, death period, the age of the deceased, the kind and type of weapons used to inflict injury, and mental condition, etc. In DNA testing, an assessment of the legitimacy of a child in instances involving family law by a person with expertise in that field is taken. In the Indian Evidence Act, there is no precise provision that expert evidence is substantive. Normally the Court does not rely on such expert testimony unless expert proof is backed by independent substantive proof. For this reason, the SC has found that convicting a person on the basis of the only expert witness is extremely undefined since court is not bound by such opinion, court may accept also and may reject also depending upon the legal findings arrived by the expert. It is therefore appropriate to examine expert opinion yet depending on expert opinion is poor evidence, particularly when there are doubts about the adequacy of knowledge and skill as well as in absence and lack of substantive, independent and ocular evidence in compare thereof.

### CHAPTER - III

#### FORENSIC PSYCHOLOGICAL TECHNIQUES AND TYPES

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- 14.** Institutions known as Chemical Examiner Laboratories prior to the independence established in India in the middle of the 19<sup>th</sup> Century rendered scientific service to the criminal justice administration system. The first chemical Examiner's Laboratory came into existence in Madras in the year 1849 and the first case tackled by the laboratory is concerned with the examination of wood in a case of cheating. Similar laboratories were established later in Calcutta (1853), Agra (1864), Bombay (1870) and other places. These age-old reputed institutions formed the nuclei of the Forensic Science Laboratories that were formed in the 1950s after Independence. Today in India, there are about 20 well established forensic science laboratories 4 of them being administered by the Central Government while the rest are run by State Governments. In addition, a Serologist's Laboratory as well as few Chemical Examiner's Laboratories and Document Examiner's Laboratories endure to function distinctly. Thus, in total, there are more than 30 forensic science and allied institutions in India. In all these institutions evidence materials are brought out truth and to serve the cause of justice. Thus, scientific methods are being adopted in crime investigation in India in an organized way from 1849 onwards. This, however, does not mean that scientific principles were not used in this country in crime investigation earlier.

15. The areas of investigations have been extended from the aspects of criminal behaviour of suspects and accused involved in the crime. In the current set-up, forensic psychology has become essential in Criminal Trial. That this area is effective and have direct bearing on proficiency in investigation however what is relevant to perceive is that whether any of the techniques applied for exposure of crime during the course of Investigation exceeds any right during the trial and the result whether or not before the court of law the employed techniques are admissible. That the role of forensic psychology is the growth of objective tests like Narco, Polygraphy, lie detector, voice spectrography Brain mapping Tests, LVA test etcetera however the Human Rights standards linking to accused are obligatory in nature, with respect to ICCPR and ICESCR where party states including India is under obligation to fulfil with these standards to respect and implement the Human Rights standards under the criminal system. In *Vishakha v. The State of Rajasthan*<sup>27</sup> the SC was in firm agreement that international human rights standards not inconsistent with domestic law. The accused having charged with serious or grave offence or charged with petty offence is entitled for fair and impartial investigation as well as just, impartial and fair trial which formulates basic cardinal principal of criminal justice system in India which has its orthodoxy with the constitutional command vide Articles 20, 21

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<sup>27</sup> (1997) 6 SCC 241

and 22 of the Constitution. That to summarise briefly; Judiciary has also widened the ambit of life and personal liberty connecting with Human Right by launching due process of procedural impartiality, justness and reasonableness into Article 21 in *Maneka Gandhi v UOI*<sup>28</sup>, right to speedy trial a Human Right derived from *Hussainara Khatoon v. State of Bihar*<sup>29</sup> as well as numerous rights equivalent to Human Rights like Right to Legal aide<sup>30</sup>, Right against Handcuffing<sup>31</sup>, Right against Inhuman Treatment<sup>32</sup>, etcetera including guaranteed right against gratuitous investigation and arrest<sup>33</sup>.

- 16.** That as much as Investigation is concern; Forensic science is the claim of extensive range of sciences and technologies used for the application of law and applied in courts. That forensic science ripostes core question of crime. *How, When and Who committed Crime*. That forensic science provides a lead in the investigation, helps in ascertainment of truth, strengthening the fragile chain of evidence as well as at times provides a misplaced connection in the hawser of evidence. That forensic psychology means: “Research endeavour that examines aspects of human behaviour directly related to the legal process and practice of psychology which embraces both civil and criminal

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<sup>28</sup> AIR 1978 SC 597

<sup>29</sup> AIR 1979 SC 1360

<sup>30</sup> State of Maharashtra v. Manubhai Pragaji Vashi, (1995) 5 SCC 730

<sup>31</sup> Citizen for Democracy v. State of Assam, (1995) 3 SCC 743

<sup>32</sup> Sheela Barse v. State of Maharashtra, (1983) 2 SCC 96

<sup>33</sup> D.K. Basu v. State of West Bengal, (1997) 1 SCC 416; Joginder Kumar v. State, (1994) 4 SCC 260

law<sup>34</sup> That forensic psychological techniques used for the investigation is either violative of legal or constitutional right or consent to undergo such test is made pre requisite before administrating such test through Judicial intervention. The forensic aids in instigation like voice spectrography test, LVA Test for which consent of accused is immaterial may not fall under the category of violation of Right but may fall under Right to silence even otherwise in Narco and Brain mapping tests undergone with the consent of accused/suspect though voluntary may not impact crucial bearing on its admissibility but the positive outcome of the same may be prejudiced with corroboration of other evidences to the court of law about guilt of a person. Hence, in light of above present chapter is to discuss, analyse and apprise the administration of Forensic Psychological aids applied during the course of Investigation. The function of forensic expert is to analyse physical evidence, give expert testimony before the court as and when required and furnishing, collection and preservation of evidence.

17. With the development of science and technology, modern truth finding methods during the course of Investigation has evolved for which Investigator is able to either find out why how and when the crime is committed or is unable to link up to the chain of modus of crime. The forensic psychological aids are used

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<sup>34</sup> Satyendra. K. Kaul and Mohd.H. Zaidi, *Narco Analysis, Brain Mapping, Hypnosis and Lie Detector Tests in Interrogation of Suspect*, Alia Law Agency, Allahabad, (2009), pg.10.

when there are no evidences to trace out the guilt of an accused or when FIR is registered on the basis of suspicion but the offences so invoked on the basis of suspicion must be so grave that without administrating such scientific test prima facie upon carrying out preliminary investigation, involvement of suspect cannot be made out as well as in cases where accused have been arrested but complicity of crime in question suffers from severe infirmities. That as much as tests such as Narco, polygraphy and lie detector are concern are solely rely upon the prior wilful and conscious consent of the accused. That without their consent being taken in writing; administration of such tests is impermissible under the law post 2010 Supreme Court ruling. That to briefly point out the contents of test; dependence may be located on the dictum of HC of Gujarat rendered in which is apt refereeing in present context. In *Sunilkumar Virjibhai Damor v. The State of Gujarat*<sup>35</sup> the HC squarely narrated psychological technics. The historical record of psychological forensic testing from the day of Jesus Christ through the Middle Ages traced back to the history of torture. Prevailing ordeals were red hot iron ordeal, balancing, boiling water, chewing rice, red water. This had indeed emerged from superstition and religion. These tests were designed to explore the innermost recesses of the mind of subjects<sup>36</sup>.

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<sup>35</sup> 2018 SCC OnLine Gujarat 2153

<sup>36</sup> Don Grubin & Lars Madsen, "Lie Detection and the Polygraph: A Historical Review," Vol. 16(2), The Journal of Forensic Psychiatry and Psychology, 2005, at p. 358

## POLYGRAPHY TEST<sup>37</sup>

- 18.** The creation of different scientific instruments of pulse measurement, blood pressure, electric skin response and word associative techniques was the beginning of the use of forensic measurements, which all prepared the way for polygraph development. The contribution of Munsterberg and Marston is worth highlighting when it comes to using blood pressure as a measure. In criminal investigation they supported the use of blood pressure tests. Another important work is of physiological concepts from Lombroso who was among the first to interview someone to verify the truthfulness of his assertions. The phrase polygraphy comes from Greek and implies numerous writings in Polygraphic. It allowed the users to write a double copy with two styles simultaneously when the original was generated<sup>38</sup>. The invention took place in 1921 by John Augustus Larson. He was the first person to record more than one parameter in order to identify disappointment at the same time. First Polygraph that simultaneously records pulse variations, blood pressure and breathing, establishing a relevant irrelevant technique through interview process. The concept behind polygraph testing is that culprit is more inclined to lie about the relevant crimes and this, generates a hyper state of mind.

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<sup>37</sup> Paul. V. Trovillo, "History of Lie Detection," Vol. 30(1), Journal of Criminal law and Criminology, May – June 1939, at p.105

<sup>38</sup> Jennifer M C Vendemia, "Credibility Assessment: Psychophysiology and Policy in the Detection of Deception," Vol. 24(4)



- 19.** A multitude of measures, for example heart rate, blood pressure, air rates, skin behaviour and electricity, are used to measure hyperarousal condition. Since the recorded variations in excitement levels are not always caused by lying or disappointment, the reasons for these tests are questionable. Nervousness, anxiety, fear, disorientation, mental conditions, sadness, the and other emotions might lead to them. They could also cause the effects of nervousness and other emotions. When person is speaking lie, the nerves produces a distorted sound wave which is different from what the individual produces when the same person is speaking the truth.
- 20.** It is possible to castoff novel technology to detect lying. One is the face thermal imaging, which maps the bloodstream in the face. When a person lies, the blood rushes often into the eye regions and shows nervous and excessive. Some programmes claim that they are able to detect falsehoods by analysing a speaker's speech and tone. The lie-detection keyboard has further upgraded to recognise the falsehoods by studying typing patterns when a person type into a computer, detecting wetness in finger and body heat. The fundamental theory of this test is that when people lie, they also get noticeably nervous about lying. The heart beat upsurges, blood pressure drives up, breathing pace change, sweat increases, etc. Therefore, there is no direct incursion, in this test the polygraph is taken which gives this response and an expert would then explain these

reactions in the court which would be his reading of the polygraph from which would flow his conclusion which are to be admitted or not admitted on appreciation of the statement and the objections raised thereto. The nature analysis of the polygraph analysis shows that the exam is non-invasive. There is no declaration on the issue. Although the individual replies the words "yes" or "no," the findings of the test are not taken into account. Only physiological parameters are assessed when the replies "yes" or "no" are given.

#### **N A R C O T E S T<sup>39</sup>**

21. Horseley created the phrase Narco Analysis from a Greek word 'narkc' that implies engorgement, anaesthetic, or torment. This procedure employs psychotropic medicines, especially barbiturates, which promote the development of a "trance like condition." Psychoanalysis with medications induces a sleep-like condition. liquified in 30 ML of distillate water, the serum drug is injected with 3 grammes of sodium pentathol. The solution is inhaled with 10% dewlack over a three-hour period with anestheticians. This test has obviously been invaded by the body. In order to slow the suspect into hypnotic trance, the speed of administration is regulated. During the testing procedure, ECG and blood pressure are constantly checked. Both video and audio clips are captured for the disclosures

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<sup>39</sup> Charles E. Sheedy, "The „Truth Drug“ in Criminal Investigation," Volume 20 (3), Theological Studies, September 1959, at p. 402.

made during the hypnotic trance. The whole operation is graphicated in video. The questions are carefully planned and continued so that the ambiguities during the drug questioning can be reduced. The suspect will relax for 2-3 hours after the Narco test. In gathering the evidence, the report provided by the specialists is important. The dose depends on the age, sex, health and fitness of the person. In the phase of hypnosis, the questions are asked. At this time the person cannot answer naturally by itself, however could only answer certain yet easy inquiries on certain chain of investigation. Lying is actually more complicated than telling the truth. By the use of his imagination a person may lie. When a person says falsehoods, his brain filters his ideas and chooses what is to be disclosed or dissimulated. This implies that the medication works to suppress the brain's thinking filtering process, so that the person cannot manipulate the responses. He will respond and not be able to lie spontaneously. In India, these tests are performed either at Forensic Science Laboratories having developed the special operation theatres or in civil hospitals.

- 22.** Narco Analysis is criticised as not scientifically valid and unreliable. The chemicals utilised in the test, such as pentothal sodium, amytal sodium, scopolamine etc., do not guarantee that the information is accurate. In fact, the inhibition is reduced and the lockability increased. The discoveries during the course of test vide interrogation are occasionally unrelated,

hallucinations based on dreams or personal data. The tests also showed that certain people may still mislead even in the hypnotic period. Therefore, the investigator would need to have considerable ability in extracting and identifying facts which may be beneficial and may aid in the investigation. It is also crucial to recognise that certain people are quite questionable. This is really a problem in particular since investigators who are under pressure to provide findings would formulate questions in a way that prompts incriminatory replies. Since there are no universal criteria for assessing the effect of Narco Analysis Test since the responses of individuals may vary and the excessive amounts of the drug induction would place the person in coma, or possibly kill him or may result into partial disability.

- 23.** The consent of accused before administering the test is pre-requisite and without the consent, forcefully such psychological test cannot be performed even for the aid of investigation<sup>40</sup>. The details discussions would fall in coming chapter on the subject of guidelines laid and observations and finding arrived by the SC in the selvi case but admittedly without consent the test is impermissible and inadmissible. The investigator may take the consent of the learned judge, subject to the approval of the person, for such testing. Therefore, if without consent such test is conducted during the custodial interrogation that would nullify the entire investigation.

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<sup>40</sup> Selvi v. State of Karnataka (2010) 7 SCC 263

**BRAIN MAPPING TEST<sup>41</sup>**

24. The doubtful suspects are initially asked under brain mapping to find out whether any material is being hidden. The brain initiation for the linked memory is done by providing the individuals with a list of words. The list used for brain mapping test includes three categories of words, part I includes unaligned words that have no direct association. Part II includes terms of investigation connected directly to the case and suspected of causing concealed information. Part III then includes an objective that is not included in the previous two parts. This test is recorded by the acquisition of the answer using the EEG-ERP Neuro Scan cable system on 32 channels. The 32 electrodes are put directly on the scalp while doing this test twice, each phrase being randomly presented in three parts. The suspect should relax and hear the words in the auditory mode. This test does not anticipate the witness to reply orally. The finding given by the experts after the test is performed to show the presence of the necessary information that is useful in investigating and gathering evidence. The experts assess the presence of the needed information to investigate and gather evidence. It will be noted that at the end of such tests the accused or the suspect has knowledge of the subject on which they were questioned or is in possession of it. No verbal answer from the witness is given here.

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<sup>41</sup> *Sunilkumar Virjibhai Damor v. State of Gujarat* 2018 SCC OnLine Gujarat 2153

25. The electric field potential variations generated by the total of the brain's neuronal activity are monitored by electrodes placed on the skin of the head and face. Potentials associated with the event are changes in the brain directly linked to particular processes of perception or knowledge. It is based on a discovery that the brain generates a unique brain wave pattern when a person perceives a familiar stimulus. A widely-used technique in India is to assess the Brain Electric Activation Profile, popularly known as the 'P300 Waves Test.'" The consent of accused before administering the test is mandatory.

#### **LAYERED VOICE ANALYSIS / VOICE SPECTROGRAPHY**

26. That as much as other Forensic test like Voice Spectrography test and LVA test are concern are usual mode of forensic investigation wherein nor the consent from accused or suspect is required neither it involves administration of any drugs. That the *Voice Spectrography Test* is a technique by which a voice is recognized in multi-layered course necessitating the usage of mutually auditory and graphic senses. That under this test, out of numerous soundtracks; one or more soundtracks of the voice is acknowledged with one or more recorded voice samples of one or more suspects or accused. That the Voice Spectrography test is majorly applied for the offences under the PC Act when decoy trap is arranged and all the material conversation with respect to demand, acceptance and recovery is recorded in a voice recorder device used during the course of trap. That before filing

the Final Investigation Report in ordinary course; the accused is called upon to record the voice for purpose of comparing with the recorded conversation. The test is administered only for purpose of Investigation. During the test, the accused/suspect receives carefully organised easy questions. Various techniques of inquiry are employed. The hypothesis is that noticeable changes in the voice graph would occur when a suspect mention<sup>42</sup>. On magnetic tape recorder, the voice is mixed and recorded. The band is added to the psychological strain assessor to identify whether or not stress is present that may be re-evaluated. LVA Test uses a broad variety of speed analyses to detect minute unintentional changes in the waveform. Furthermore, the examinations are also about other questions of law, constitutional law, and human rights. The validity of these tests is demonstrated by no published study effort. The nature of all voice tests, however, shows that they are non-invasive.

- 27.** The tests can be carried out even without the knowledge of individual who is subjected to such test. Thus, the function and nature of forensic psychological examinations shows that the degree of physically intrusive testing vary, although they are categorised under the same category. Even without the

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<sup>42</sup> Nemesysco, Voice Analysis Technologies, *White paper on Layered Voice Analysis (LVA) Technology*, available at <http://www.nemesyscoservicecenter.com/pdf/LVA%20-%20Technology%20White%20Paper.pdf>

awareness of the person, some tests can be done. However, certain additional tests are performed using antipsychotic injections in the individual. Forensic psychological tests may therefore be classified into two groups based on the level of invasiveness of the individual to which the tests are carried out. Invasive testing may be described as the test person is using instruments that penetrate the body physically, like in the instance of obtaining blood samples. Non-invasive treatments include non-instruments which penetrate the body physically, such as a pressure cuff, an electroencephalogram etc. All tests save the Narco Test may thus be called non-invasive tests, while the Narco Test can be called an intrusive test.



**CHAPTER – IV**  
**ADMISSIBILITY & JUDICIAL INTERPRETATION OF FORENSIC**  
**PSYCHOLOGICAL EVIDENCE**

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**28.** The use, acceptability and admissibility of scientific proof in criminal proceedings is a vital issue. These matters are depending upon the police how they handle since its inception in their own ways. That is, we cannot look for the support of science-based evidence in order for justice to be successful, as a civil society ruled by rule of law incorporates both knowledge and law, by resorting to third-grade procedures. In the previous chapter, we are using a variety of scientific procedures. The researcher has restricted the discussion here in this chapter with respect to its admissibility and judicial interpretation. All of this must thus be inside the legal framework. It is here that three special technologies, the narco-analysis, polygraph and brain mapping, are used and admissible. In using scientific aids in investigation; the cardinal principle is the principle of fair play, an impartial attitude, analysis and application of these scientific evidence by investigators and forensic experts. Once it has been established that one witness field is recognisable for evidentiary purposes, the next crucial question is whether the witness themselves is an expert in this subject. In order to be permitted to provide expert opinion, person must have adequate knowledge and experience in an area in which he is recognised to be a court expert.

**29.** Psychologists conducting forensic psychological tests at Forensic Science Laboratories in India, are trained and qualified to complete a minimal level of psychological education. They have expertise outside of the common layman's understanding and so come under the expert's jurisdiction of Section 45 of the Evidence Act. In the Basic rule, if an expert wants to provide support for which his evidence is obtained, then he must provide the satisfactory criteria to assess the validity of his finding. Two crucial conditions are needed for the basic rule. First of all, the expert should expressly give his opinions on the facts and assumptions. Second, inasmuch as its view is founded on facts, the admissible evidence must demonstrate these facts. The expert might derive the foundation for his conclusion from outside sources based upon his skill. The trustworthiness of scientific evidence in India is not uniformly assessed. It is essential that the scientific evidence is corroborated and plays a crucial role in determining eligibility. Since there is no law forensic psychological examinations and their evidences, the eligibility concerns are controlled by the Indian Evidence Act, 1872 and the Criminal Procedure Code, 1973. When Indian Evidence Act is analysed, it could be seen that Sections 45, 46 are the relevant provisions regarding expert evidence which is already discussed in the chapter 2. It must, however, be determined as to how the forensic psychologist falls within the scope of expert opinion, in the ambit of admissibility.

- 30.** While psychological evidence under Section 45 is not directly cited in plain reading, psychological evidence appears to be within the definition of expert evidence. The 'Arts and Science' would attract the psychologist and therefore the Psychology is considered to be soft science. It also includes expert views on such materials as dependability of eyewitness evidence as well as lie detection. The lie detector test is not relied as forensic evidence. Lie detection is a scientific topic about which everyone has strong feelings. It is appraised by some as the court of last resort - a way to establish guilt or innocence in cases that cannot be resolved by other means. Some feel that lie detection is an applied technology that has gone out of control and a threat to basic civil liberties. Evidences are the wheels to the cart of justice.
- 31.** If the justice is believed as end, the evidence becomes the mean. The evidence has been classified in multiple ways, such as oral evidence (testimony), documentary evidence and material (physical) evidence and therefore testimony of an ocular witness is considered as sterling and therefore the secondary evidence such as forensic psychological input bring scientific temper in judicial realm by way of corroboration. Section 293 of the Code 1973 recognises the function of government forensic scientists, in the criminal justice system in addition to section 45 of the Evidence Act. Section 293 of the Code in fact overrides section 45 the Indian Evidence Act of section 45. The aim is to waive

the cross examination of specific government scientists for their qualification, status and experience. The clauses in question clearly referred to officers excused from personal appearance before the court. In those circumstances, if not contested by the other side or the prosecution, the Court will proceed with its report. Though Forensic Psychologist is not classified in Section 293 of the Code, the expert report based on these tests would come inside the realm of the Section 293 of the Code. In fact, similar issue was measured by the SC regarding ballistic expert in *State of HP v. Mastram*<sup>43</sup> In that case, the court held that Section 293 is wide enough to include junior scientific officer (ballistic expert) of Central Forensic Science. However not listed in the provision. On the basis of this ruling, the provision is broad enough to embrace this psychological branch even if it is not addressed in Section 293 specifically. Before discussing the evidentiary value of psychologist let me examine the few facets attached before psychologist is put in box for examination or deposition of expert evidence.

### **RIGHT TO SILENCE**

- 32.** UDHR 1948- A.-11.1 says: “everyone charged with a penal offence has the right to be presumed innocent until proved guilty according to law in a public trial at which he has had all the guarantees necessary for his defence”. The ICCPR guarantees that “not to be compelled to testify against himself or confess

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<sup>43</sup> (2004) 8 SCC 660

*guilt*<sup>44</sup>. That much importance to right to silence has been focused in International Criminal Law as well. That the UN Security Council while adopting the Rules of procedure & evidences for establishment of Tribunals for Former Yugoslavia and Former Rwanda explicitly provided the Right to Silence during the course of Investigation.<sup>45</sup> Moreover, the Rome Statute establishing the International Criminal Court not only deliberates right to silence but also affords that silence adopted during the course cannot be construed and taken into account while determining the guilt or innocence of culprit. That as much as Constitution of India is concern, Article 20 (3) entitles and guarantees every person a right not to be compelled to be a witness against himself as well as the indispensable Right to silence is settled by virtue of Judicial Incarnation from the case of *Nandini Sathpathy*<sup>46</sup>. Therefore, the international norms have to be persuaded in confirmation with domestic laws in order of nonappearance of any intended physical or psychological burden of the Investigating agency on suspect with a sight to obtain any form of confession and if so then it would tantamount to self-incrimination, however sheer request to speak truth cannot be considered as a self-incriminating tactics of Investigation but the truth finding process must be free from any coercion, torture and compulsion of any kind.

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<sup>44</sup> 14(3)(g) Article- ICCPR

<sup>45</sup> Rule 42, ICT for Rwanda, Rules of Procedure and Evidence.

<sup>46</sup> AIR 1978 SC 1025

## RIGHT AGAINST SELF-INCRIMINATION

33. That the aim and concept of right against self-incrimination is to underly fundamental values of right to privilege and right to secrecy of a suspect of crime and ultimately to see that accused or suspect is prevented from inhuman conduct and insensitive abuses as well as to protect from self-deprecatory declarations to ensure voluntariness and reliability of the evidence. That as mentioned above A. 20 (3) of the Constitution, protects right in of self-accusation and similar protection guaranteed and available to the accused u/ provisions of S. 24-27 of the Evidence Act 1872. Moreover, 180<sup>th</sup> Report of LC of India dated 09.05.2002<sup>47</sup> on event of changes made applicable in other countries with respect to right to self-incrimination, considered whether such right guaranteed under Indian Constitution shall have limited application or not and the commission in report settled that there is no requirement to limit the fundamental right available against self-incrimination since adequate measure are being taken when question of violation under the same arises. However, subsequently, report submitted by the Malimath Committee in 2003 has taken contrary view that:

*“Drawing of adverse inference against the accused on his silence or refusing to answer will not offend the fundamental right granted by Article 20 (3) of the Constitution as it does not involve any testimonial compulsion. Therefore, the Committee is in favour of amending the Code to provide for drawing appropriate inferences from the silence of the accused”*<sup>48</sup>

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<sup>47</sup> <https://lawcommissionofindia.nic.in/reports/180rpt.pdf>

<sup>48</sup> Dr. Justice V.S. Malimath, *Committee on Reforms of Criminal Justice Systems* 2003

**TESTIMONIAL COMPULSION**

- 34.** Therefore, in light of the above, the question which requires deliberation is that whether Forensic Psychological aids applied during the course of investigation or collection of evidence violates right of the accused. That to answer the same, a reliance is placed in the judicial pronouncements. The first is *State of Bombay v. Kathikalu Oghad*<sup>49</sup> wherein the SC seized that Right in contradiction of Self-incrimination and testimonial compulsion begins at the stage of Investigation itself. The very right is available through and in all stages of investigation. That the case in hand complexed significant enquiry of law was whether aids of gathering evidences such as fingerprint sample, handwriting sample, DNA collection has any baring under Article 20(3) or not and would it amount to self-incrimination. That the SC discussed what amounts to the term 'to be witness' with reference to Article 20(3) and held that when any person informs or conveys to the court or to investigator any knowledge with respect to relevant fact either orally or in writing under personal knowledge of the facts then it would amount to be a witness. That the court went on holding that the facts so revealed under personal knowledge must itself be sufficient to establish the tendency of incriminating accused himself and therefore, sample handwriting or sign or finger imprint given during course of investigation are no testimony compulsion or

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<sup>49</sup> AIR 1961 SC 1808

innocuous within clause (3). That further the Supreme Court opined that mere questioning by police during investigation resulting into production of any material or document even otherwise incriminatory would not tantamount as compulsion under 20(3) of Constitution as well as police is empower to collect the same for the purpose of investigation and comparing with the suspect materials. That because such production requires verification, investigation, corroboration and that does not become conclusive piece of evidence and therefore do not fall within the ambit of being compulsion. Thus, above aids of investigation do not violate constitutional Right. That as mentioned above, the techniques, do not fall within the ambit of self-incrimination therefore, the question further requires elaboration as to whether Narco Test, Brain mapping test, polygraphy test applied during the course of investigation being forensic psychological techniques violates and whether result derived from such technique would tantamount to testimonial compulsion. That in the year 2010 the Apex Court in the case of *Selvi* had an occasion to decide the question of law in respect to clause 3 of Article 20 in light of constitutional validity of Narco Analysis, Brain Mapping and polygraphy test applied as forensic psychological methods during the Investigation for collecting evidences, its evidentiary value and admissibility before the court of law since prior to the same various High courts ruled in contrary allowing to undergo such aids without



consent by with an order of the court. The observations are reproduced as follow:

262. ... the compulsory administration of the impugned techniques violates the “right against self-incrimination”. This is because the underlying rationale of the said right is to ensure the reliability as well as voluntariness of statements that are admitted as evidence. This Court has recognised that the protective scope of Article 20(3) extends to the investigative stage in criminal cases and when read with Section 161(2) of the Code of Criminal Procedure, 1973 it protects accused persons, suspects as well as witnesses who are examined during an investigation. The test results cannot be admitted in evidence if they have been obtained through the use of compulsion. 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. Article 20(3) aims to prevent the forcible “conveyance of personal knowledge that is relevant to the facts in issue”. The results obtained from each of the impugned tests bear a “testimonial” character and they cannot be categorised as material evidence.

263. We are also of the view that forcing an individual to undergo any of the impugned techniques violates the standard of “substantive due process” which is required for restraining personal liberty. Such a violation will occur irrespective of whether these techniques are forcibly administered during the course of an investigation or for any other purpose since the test results could also expose a person to adverse consequences of a non-penal nature. The impugned techniques cannot be read into the statutory provisions which enable medical examination during investigation in criminal cases i.e. the Explanation to Sections 53, 53-A and 54 of the Code of Criminal Procedure, 1973. Such an expansive interpretation is not feasible in light of the rule of “ejusdem generis” and the considerations which govern the interpretation of statutes in relation to scientific advancements. We have also elaborated how the compulsory administration of any of these techniques is an unjustified intrusion into the mental privacy of an individual. It would also amount to “cruel, inhuman or degrading treatment” with regard to the language of evolving international human rights norms. Furthermore, placing reliance on the results gathered from these techniques comes into conflict with the “right to fair trial”. Invocations of a compelling public interest cannot justify the dilution of constitutional rights such as the “right against self-incrimination”.

264. In light of these conclusions, we hold that no individual should be forcibly subjected to any of the techniques in question,

whether in the context of investigation in criminal cases or otherwise. Doing so would amount to an unwarranted intrusion into personal liberty. However, we do leave room for the voluntary administration of the impugned techniques in the context of criminal justice provided that certain safeguards are in place. Even when the subject has given consent to undergo any of these tests, the test results by themselves cannot be admitted as evidence because the subject does not exercise conscious control over the responses during the administration of the test. However, any information or material that is subsequently discovered with the help of voluntary administered test results can be admitted, in accordance with Section 27 of the Evidence Act, 1872.

265. The National Human Rights Commission had published Guidelines for the Administration of Polygraph Test (lie-detector test) on an Accused in 2000. These guidelines should be strictly adhered to and similar safeguards should be adopted for conducting the “narco-analysis technique” and the “Brain Electrical Activation Profile” test. The text of these guidelines has been reproduced below:

(i) 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.

(ii) 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.

(iii) The consent should be recorded before a Judicial Magistrate.

(iv) During the hearing before the Magistrate, the person alleged to have agreed should be duly represented by a lawyer.

(v) 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.

(vi) The Magistrate shall consider all factors relating to the detention including the length of detention and the nature of the interrogation.

(vii) The actual recording of the lie-detector test shall be done by an independent agency (such as a hospital) and conducted in the presence of a lawyer.

(viii) A full medical and factual narration of the manner of the information received must be taken on record.”

- 35.** That the court opined that any accused or suspect should not be compulsorily or forcibly subjected to forensic psychological technique either under the guise of Investigation or even for purpose of criminal trial since such practice tantamount to unjustified imposition to the personal liberty of an individual. That the court allowed and to limited extent sanctioned voluntary administration of techniques upon free consent subject to accurate safeguard as enumerated by the Human Right Commission are followed. That as far as under consent voluntary administration of such tests and admissibility of the same are concern; the Court expounded that the outcome of such techniques cannot by themselves be admitted under the Evidence Act reason being the suspect or accused losses the conscious on the answers during the test since the test is subject to administration of various drugs and suspect losses naturalness of his mind to respond to the questions raised but with a rider that any information regarding relevant facts of the case or material which is subsequently discovered upon conclusion and result as well as under the aid of consensual administered techniques can be made acceptable under/s 27 regardless of whether succeeding evidence demonstrates to be inculpative or exculpatory.
- 36.** That as much as Voice Spectrography test conducted by Investigator to compare the recorded voice samples with natural voice samples during the course of investigation are concern the

HC of Gujarat, in the case of *Natvarlal Amarsinhbhai Devani v. State of Gujarat*<sup>50</sup> though distinguishing the dictum of *selvi* as well as while replying upon the view taken by SC in *Ritesh Sinha v. State of U.P.*<sup>51</sup> held that in the absence of any express statutory command to compel accused / suspect to undergo voice spectrography test would duress the mental privacy, the investigating agency cannot compel the accused to undertake such test but also found that the undergoing such test does not tantamount to violation of Article 20 sub clause 3. However, Supreme Court again in a reference made in the *ritesh Sinha* the court under course of judicial interpretation conferred the power to order suspect / accused to undergo voice spectrography test / recording of voice sample for the purpose of investigation of crime by magistrate<sup>52</sup> and validated the forensic technique to apply for course of investigation and left upon the issue to be decided once grievance with respect to constitutional validity of voice spectrography test under the clause 3 of Article 20 is raised.

- 37.** Therefore, by a judicial intervention magistrate is empowered to order voice spectrography test till the legislature brings amendment in the Code, 1973 for the purpose of putting the investigation to its logical conclusion whereas Layered Voice Analysis (LVA) a purely modern science plays with the mind

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<sup>50</sup> Special Criminal Application 5226 of 2015, decision dated 18.01.2017

<sup>51</sup> (2013) 2 SCC 357

<sup>52</sup> *Ritesh Sinha v. State of U.P.*, (2019) 8 SCC 1

wherein through determination each layer or section of layer of voice is determined and analysed as answers uttered under firmness, anxiety, stress, dilemma, confusion, doubtful, etcetera. However, the test has started applying in India recently from 2015 only and therefore, legality and validity has not yet reached to the court of law. Hence, DNA test, LVA test, Voice Spectrography test do not fall under compulsion and are applied only for purpose of Investigation unlike Narco analysis test, brain mapping and polygraphy which is subjected to limitation on its admissibility and consent as ruled in *selvi* by the Supreme Court. And the said ancillary tests do not violate the constitutional right.

- 38.** In *Santokben Jadeja v. State of Gujarat*<sup>53</sup> the HC of Gujarat took a view after considering the *selvi* judgment that narco-analysis test is accomplished under the direction of expert doctors, and adequate attention is taken and consensus has to be taken, the state of the accused shall be observed, and the risk factor is small. Indeed, the risk for most human activities is part of life, and so, the contested criteria alone cannot be rejected. Further in the famous Aarushi Talvar<sup>54</sup> murder case the entire case was cracked on the basis of Narco Analysis test wherein the SC held that the production of reports of certain psychological tests like narco, brain mapping and polygraphy conducted on 3 persons

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<sup>53</sup> 2007 SCC OnLine Guj 93

<sup>54</sup> Rajesh Talwar v. CBI, (2014) 1 SCC 628

during investigation who were suspected persons were in police custody cannot be relied or allowed to be produced as evidence since the stage had already lapsed, benefit cannot be granted. In view of above deliberation, it is revealed that direct use of the outcome of forensic psychological tests applied barring limitations under Section 27 of the Evidence Act is still not self-incriminatory and has its limited bearing on admissibility. Therefore, the findings so obtained under the pretext of such forensic psychological aids may not be construed as predetermined or conclusive one under the evidence act.

## CHAPTER V

### CONCLUSION *and* SUGGESTION

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39. All rights for the accused from the arrest phase through the execution of the sentence are covered by fair trial. However, the study is confined to evidence, as the admissibility as evidence is one of the key questions about Forensic Psychological Tests. The purpose of admissibility checks is to interpret and enforce the accused's rights. The assessment of admission and exclusion of evidence play a foremost character in determining how the acceptability of evidence and protection of accused's rights must be balanced. Corroboration of scientific evidence including forensic psychological evidence is in India the only criteria for its admissibility. The purpose is to reject forensic evidence unless the principles and methods of forensic evidence are scientifically valid, thus protecting the rights of an innocent. And therefore, the findings of the test in line with S. 27 of IEA are admissible for the partial determination of prosecution. The study reveals that, in establishing admissibility of evidence, the courts make no distinction between good and unfavourable test results. It aims at ensuring fair trial rights of the accused by the legal rules governing admissibility however, if a good test result on these grounds is denied, it can do the accused more injury than justice. If that proof is only in its favour, it can affect its valuable right to defence. The sole necessity and admissibility for these tests must therefore is required to be evaluated. It may

therefore be said that the effective control and safeguarding the rights and safety of accused by assimilating non-invasive forensic psychological tests would not inadequately guarantee the rights of those accused. Invasive tests, such as narcoanalysis, may be used by investigators with appropriate protections such as informed consent, lawyer's attendance, video graphic design in its whole, etc.

40. The tests like LVA, Voice Spectrography, Polygraphy, DNA, lie detector are administered without consent for the purpose of detection of crime during the course of Investigation which only *aids* in investigation and would not tantamount to self-incrimination. The consequences of such aids cannot be acknowledged in evidence if obtained over the practice of force or against will and therefore, outcome derived does bear components of 'testimonial' and therefore result cannot be branded as substantial evidence. That compelling to undertakes such tests violates right to silence under the cannon of personal liberty and therefore when force or coercion are applied to reveal fact is inadmissible. However, with respect to Rights when person undergoes such techniques may exposed to detrimental mental consequences as well as outcome of tests may prompt Investigating Agency to occupy in custodial abuse as well as undue harassment to reach to the roots of crime upon incomplete or unfinished information regarding crime.



- 41.** That under psychological tests; the interrogation carried does not result into physical sufferings except under Narco but certainly the mental woe under which subject is driven back to the scene of crime and will undeniably have post-test psychological effects in such cases where crime in question is being committed under spur of moment or unintended or suspect already facing serious physical ailments. Though the said state of mind can be termed as side effects of tests which may remain for provisional period however with respect to other aids like LVA, the science plays with mind and upon reaction of mind the analysis is carried away and that playing with mind, in my opinion, would tantamount to cruel and inhuman treatment which violate Human Right.
- 42.** The study concluded that evidence based on non-invasive forensic psychological tests does not breach self-serving rule and the common knowledge rule and as any other opinion evidence, that the evidence based on forensic psychological tests it depends on court to accept it or not. Furthermore, the judge relies upon those opinion only and admits evidence which directly addresses the issue of culpability or innocence if any scientific expert opinion is admitted. In relation to forensic psychological tests, it is also the same reasoning. For all non-invasive forensic psychological tests, the purpose of the proof is not to demonstrate that the accused is not the kind of person to commit the offence. This is intended to provide evidence to

the extent that a person who tells the truth complies with the physiological responses of the accused, or he knows the relevant facts. Thus, forensic psychological test is not, on the grounds of the fact-finding procedure. An invasive procedure should only be utilised as an investigative assistance.

- 43.** It is true that there are considerable differences among evidence based on forensic psychological tests. But this is not limited just to these tests. When we study scientific evidence based on forensic psychological science, it is clear that the disciplines of forensic science have a wide diversity of methods, techniques employed, dependability, error rate and general acceptability. Certain fields are founded on laboratory. The conclusions of forensic expert are susceptible. Indeed, the misrepresentation of scientific data, prejudice, incompetence and lack of internal controls on the scientific evidence submitted in the trial is not restricted just to forensic psychological tests but is generically relevant to all areas of forensics. The research has shown that psychological tests in the forensic field must be admitted to court. However, it should also be noted that most tests are in the infant stage. The courts also strive to balance the right of the accused to self-incrimination and fair trial, as well as the right of effective investigation and punishment of criminals. It is also relevant to highlight that the accused are also entitled to voluntarily submit these tests with the right to presumption of innocence, self-inculpation and the right to a fair trial and legal

counsel. Thus, it is important to take adequate precautions for testing in the criminal justice system. This study has shown that no regulation on forensic psychological tests currently exists in India. There's also a desire to regulate forensic psychology in the nation. The standards laid down in *Selvi* are only law that governs forensic psychological tests.

- 44.** Under the absence of special law or rules or provisions in the current rules on the admissibility of forensic psychology tests, there would be appropriate to have directives on the aspect of admissibility of the tests in the rules of evidence. If test findings are allowed without adequate protections, the rights of the accused can be unreasonably interfered with. The exclusion of such tests can also unreasonably impede with law enforcement, as a key tool for investigating to fetch the crime. The result of lie detector and brain mapping tests is questionable that they will always be held in court. While the proponents of polygraph argue that test results are a conclusive sign of the truth of a guilty denial by an accused person, these findings are auditory and represent a declaration that is inadmissible in accordance with law. For the courts, it cannot be utilised properly for negative or corroborative reasons in the case of the lie detector or for time being even narco analysis test.
- 45.** **Hence,** all the aids other than Narco analysis may not result into any statement which is construed as confession which may enable prosecution a connection in the sequence of evidence

required to be sufficient to convict or prosecute the subject. That in major aids except Narco test; psychological element involved matters for detection of crime and therefore, playing with mind with science as investigator is indirectly permitted to draw result based upon the mental elements and its manipulation and mental elements are changeable cannot be traced as straight jacket standards. The result depends upon the frequency of mental elements, keeping results asides, as well as keeping admissibility issue aside, in my opinion handling by manipulation with the mind affects brain activity of accused. And playing with brain activity under whatsoever lawful intention may be so strong cannot neglect the privacy of mind. Although there are other reasons also for which Forensic Psychological Aids applied may violate right to fair trial on the ground of access to legal aid during tests except Narco Analysis, right to defence during such interrogation, the gravity of proof beyond reasonable doubt can be strengthened by corroborating with the outcome of aids as well as at times it may prejudice or influence the judge also while conducting the trial. That except guidelines issued by Human Right Commission with respect to safeguards to be adopted while undertaking such techniques having heavily relied by supreme court is the case of selvi; there are no legislation mandate to authorise the magistrate to grant permission under the Code of Criminal Procedure, 1973 as well as there is no law yet came in force to mandate such techniques as essential techniques of investigation for evidentiary value.

## SUGGESTIONS

- A.** Merely the expert offers an independent opinion because of which it does not become an independent evidence. Some of the possible improvements I see that may solve the gaps to rely solely without corroboration of independent ocular evidences are: More technology or tools should be available that can assist an expert reach more solid findings barring the admissibility issues.
- B.** There should be more on field expert. Each investigation originates at the venue of the crime, whether the evidence value or objects might be lost if not properly handled or cared for in cases of other expert evidences. Police in India lack enough control over the crime scene, therefore additional field forensic experts are the need of an hour.
- C.** Each expert renders an opinion on evidence and the information supplied by the investigating officer in the laboratory. The expert should gather the data and evidence rather than draw on the material given by others in order to increase the quality of reports.
- D.** When an expert is called to the court for his testimony, he must go to depose himself. No other person could better explain the position or conduct the examination than the Expert himself since in many cases discussed above it is observed that non-examination of expert u/45 without corroboration has resulted into a fatal condition and accused gets benefit out of it.

- E.** There should be more independent forensic laboratories in each state so that pending cases are resolved as soon as possible as a result of the delay in state forensic laboratories forwarding the accurate and reliable and non-tempered reports of examination of tests carried out since only Gandhinagar is having the adequate facilities and equipment to conduct Psychological Test and other forensic tests and accused and evidences collected are brought from different parts of the country to one state.
- F.** If person does not consent for undergoing such test in that view of the scenario during the course of custodial interrogation under the police custody; as a matter of right Psychologist must be allowed to remain present and shall also be allowed to interrogate as to read the culpability.
- G.** In order to decide what tests will be legitimate and reliable and who will be examiner; the Government, by way of law should form a statutory organisation comprising of legal luminaries, scientists and psychologists.
- H.** Forensic Psychological Test be added in S. 53 of the Code, 1973 or Psychologist may be added in explanation A to S. 53 of the CRPC, 1973.
- I.** Central Government shall specify 'Government Forensic Psychologist' as Government Scientific Expert vide notification u/ clause G of S. 293 of the Code 1973 to use the examination / analysis report as evidence as to avoid expert opinion u/s 45 of the IEA.

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