

FORENSIC PSYCHOLOGICAL TESTS AND THE CHANGING
CONTOURS OF RIGHT AGAINST SELF-INCRIMINATION IN INDIA



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This is to certify that YASH KOTHARI is pursuing Master of Laws (LL.M.) from National Law University and Judicial Academy, Assam and has completed his dissertation titled “Forensic Psychological Tests and the Changing contours of Right against Self-Incrimination in India” under my supervision. The research work is found to be original and suitable for submission.



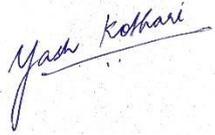
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DECLARATION

I, YASH KOTHARI, pursuing Masters of Law (LL.M.) from National Law University and Judicial Academy, Assam, do hereby declare that the dissertation titled “Forensic Psychological Tests and the Changing contours of Right against Self-Incrimination in India” is an original research work and has not been submitted, either in part or full anywhere else for any purpose, academic or otherwise, to the best of my knowledge.



Date: 22/07/2021

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PREFACE

Right against self-incrimination is a cherished principle of civilized criminal jurisprudence. The underlying rationale of this right is to curb the prevalence and use of third-degree methods by the investigating machinery. If involuntary statements were readily given weightage during trial, the investigators would have a strong incentive to compel such statements - often through methods involving coercion, threats, inducement, or deception. Even if such involuntary statements are proved to be true, the law should not incentivise the use of interrogation tactics that violate the dignity and bodily integrity of the person being examined. In this sense, 'the right against self-incrimination' is a vital safeguard against torture and other 'third-degree methods' that could be used to elicit information. It serves as a check on police behaviour during the course of investigation. The exclusion of compelled testimony is important, otherwise the investigators will be more inclined to extract information through such compulsion as a matter of course.

However, with the advent of softer alternatives in the form of forensic psychological tests, the very basis of right against self-incrimination may be thwarted. These tests, which are prima facie considered to be non-invasive could ensure proper investigation of crimes and successful prosecution of offenders by ensuring proper treatment of the accused at the same time. To ensure a state-individual balance, the rights of the accused have to be at par with the investigative powers and machinery so as to ensure that the sanctity of our criminal justice system is not jeopardized. It is in this light that our understanding of various forensic psychological tests, their efficacy, relevancy and admissibility in present-day legal systems, within the silo of right against self-incrimination becomes crucial.

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1983 – Lie Detector Act (Australia)

1988 – Employees Polygraph Protection Act (United States of America)

1990 - The New Zealand Bill of Rights

1993 - Protection of Human Rights Act

1998 - Human Rights Act (United Kingdom)

2004 - Human Rights Act (Australia)

2006 - Charter of Human Rights and Responsibilities Act, 2006 (Australia)

2007 - Offender Management Act (United Kingdom)

TABLE OF ABBREVIATIONS

| Serial No. | List of Abbreviations | Expansions |
|------------|-----------------------|--|
| 1 | AEPE | American Academy of Polygraph Examiners |
| 2 | APA | American Polygraph Association |
| 3 | BEAP | Brain Electrical Activation Profile |
| 4 | BEOS | Brain Electrical Oscillation Signature Profiling test |
| 5 | C.J. | Chief Justice |
| 6 | Cr.P.C. | Code of Criminal Procedure, 1973 |
| 7 | CVSA | Computer Voice Stress Analyzer |
| 8 | DNA | Deoxyribonucleic acid |
| 9 | EEG | Electro Encephalograph |
| 10 | FMRI | Functional Magnetic Resonance Imaging |
| 11 | FSL | Forensic Science Laboratory |
| 12 | HC | High Court |
| 13 | HP | Himachal Pradesh |
| 14 | ICCPR | International Convention |
| 15 | J. | Justice |
| 16 | LVA | Layered Voice Analysis |
| 17 | MERMER | Memory and Encoding Related Multifaceted Electroencephalographic Response |
| 18 | MP | Madhya Pradesh |
| 19 | NHRC | National Human Rights Commission Guidelines |
| 20 | SC | Supreme Court |
| 21 | UDHR | Universal Declaration of Human Rights |
| 22 | U.K. | United Kingdom |
| 23 | UN | United Nations |
| 24 | UP | Uttar Pradesh |
| 25 | USA | United States of America |
| 26 | v. | <i>versus</i> |
| 27 | VSA | Voice Stress Analysis |

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CHAPTER I

INTRODUCTION

1.1. Introduction

The protection of human rights through control of crime has always been the primary responsibility of any state. The state ensures human rights of its subjects through effective criminal justice system. Criminal Justice system has two main objectives. One of the objectives is maintenance of law and order by preventing and deterring crime. The other objective is to protect human rights by proper investigation of crimes and successful prosecution of offenders by ensuring proper treatment of the accused. This means that, though criminal justice system has its objective to bring to justice those who are responsible for crimes, the system itself would lose its credibility, when alleged accused are ill-treated by law enforcement officers, or when trials are manifestly unfair and also when procedures are tainted with discrimination. Thus, unless human rights of the accused are adequately protected during pre-trial, trial and post-trial stage, the state will be failing in its duty as the protector of human rights. Accused is always under the coercive power of the state. It is because of this disadvantaged position; all the civilised countries grant certain rights to him.

The nature of crime has been changing and diversifying with the advancement of science and technology. But the present-day system of criminal investigation and prosecution in India is not keeping pace with it. The situation now demands that the law enforcement should keep in pace with the advances in science and technology and should no longer rely on outmoded techniques of interrogation and detection of crime.

Since olden times, several methods have been used to elicit truth from the suspects and most of these methods were based on physical coercion including torture which is not considered as desirable in any civilized country. The 'Third-degree' methods used by investigating agencies are not acceptable to the new generation of crime investigating agencies, judges and public at large. However, 'Third-degree' methods used by investigating agencies for making confessions has not completely vanished and their misuse is still rampant.¹ It is at this juncture, the advent of forensic psychological tests and psychiatric evaluation methods assume significance.

¹ Satyendra K. Kaul and Mohd. H. Zaidi, *Narcoanalysis, Brain-Mapping, Hypnosis and Lie Detector Tests in Interrogation of Suspect*, Alia Law Agency: Allahabad, 2008, p 18.

Forensic science, as a broader term, is the application of broad spectrum of sciences and technologies used for the application of law. Simply put, it is an application of natural sciences to matters in relation to law. In practice, forensic science draws upon physics, chemistry, biology, and other scientific principles and methods. It is concerned with the recognition, identification, individualization, and evaluation of physical evidence. Forensic psychological tests, which are direct manifestation of forensic science, contributes to the criminal justice system in many ways such as, providing a lead in the investigation, helping in the ascertainment of truth, strengthening the weak chain of evidence or providing a missing link in the chain of evidence. In any criminal Justice system, use of Forensic Science is the need of the modern times. In India, the investigation and crimes and prosecution of criminals are not up to the mark. Frequent acquittals are mainly due to obsolete techniques of investigation which leave many loopholes for the defence. Hence, the Courts have time and again emphasized that it is as much necessary to protect an accused person against being compelled to incriminate himself, as to arm the agents of law and the Courts of law with legitimate powers of bringing offenders to justice.

Article 20(3) of the Constitution of India, which embodies the Right against self-incrimination has clearly laid down that no person accused of any offence shall be compelled to be a witness against himself. These propositions emanate from an apprehension that if compulsory examination of an accused were to be permitted, then force and torture may be used against him to entrap him into fatal contradictions. The privilege against self-incrimination thus, enables the maintenance of human privacy and observance of civilised standards in the enforcement of criminal justice. However, it goes without saying that the administration of justice and the need to control crime effectively requires the strengthening of the investigative machinery. As a result, several types of evidences are excluded from the purview of Article 20(3) with a view to draw a balance between the exigencies of investigation of crimes and the need to safeguard the individual from being subjected to third degree methods. Newer methods of eliciting truth and objective information, based on scientific analysis instead of coercive methods, have emerged which has altered the dynamics and the premise of right against self-incrimination. In recent times, forensic psychology experts are utilising the invisible psychosomatic subtle changes in the body of the subject like blood pressure, respiration rate, pulse rate, electrical skin resistance, subsonic vibrations of the vocal cord and brain activity.

These psychosomatic subtle changes are utilised extensively in the interrogation of subjects through various modes like Polygraph or Lie Detector, Psychological Stress Evaluator, Brain Fingerprinting, Truth Serum, Narco-Analysis, etc. These tests are mainly non-invasive in nature. They seem to have no detrimental impact on the physical health of the person who is subjected to these tests. These tests also help in the ascertainment of truth without resorting to third degree measures.

The emergence of science in the field of interrogation and investigation, has disrupted the premise upon which the right against which the right against self-incrimination rests. The underlying idea of conferring the right against self-incrimination to the accused is to prevent 'third-degree' and coercive methods to illicit information from the accused. Forensic Psychological tests and psychiatric evaluation solves the problem to a great degree and extent. As such, it also becomes imperative to study the sanctimonious psychological methods and its invasiveness against the accused and authenticity of the results derived therefrom, as well as its practical utility in the present-day criminal justice system. A holistic analysis of the theory and procedure underlying these tests is imperative to understand the impact that it may have on the accused's right against self-incrimination. At its crux, the research work seeks to address the pertinent question whether the information derived from the forensic psychological tests would amount to testimonial compulsion or not, and as a result, whether it would be hit by the Constitutional guarantee of right against self-incrimination.

1.2. Statement of Problem

Forensic Psychological Tests and psychiatric evaluation are a potent and powerful weapon in the armoury of administration of justice. The scientific examination by forensic scientists adjoins a missing link and strengthens the weak chain of investigation. Now, when criminals are shrewd enough that they hardly leave any evidence, it is the need of the hour to bring into picture forensic science and its constructive application in the criminal justice system.

The Supreme Court of India has recognized the requirement, the necessity of scientific investigation.² Law Commission also emphasized on the need of training of Police officers in using scientific methods of investigation. Forensic tests like Narco-Analysis, Polygraph and

² *Som Prakash v. State of Delhi*, AIR 1974 SC 983

Brain-Mapping are revolutionary tools of forensic science that can prove to be very fruitful in crime investigation.

At the same time, the accused is entitled to fair investigation and fair trial which is the basic fundamental canon of criminal justice system in India and is in conformity with the constitutional mandate.³ This forms the foundation of Indian criminal justice administration whereby the state and its organs are obliged to respect, protect and fulfil these rights of the citizen. It is also pertinent to note that state is restricted to make any law which takes away fundamental rights. The Constitution also provides for the enforcement of Fundamental Rights by approaching higher judiciary in case of violation of the rights. Apart from constitutional protection, statutory protections are also available to the accused under the Criminal Procedure Code, 1973 and the Indian Evidence Act, 1872.

To ensure a state-individual balance, the rights of the accused have to be at par with the investigative powers and machinery so as to ensure that the sanctity of our criminal justice system is not jeopardised. As a consequence, it must be noted that various subtle exemptions have been carved out from the ambit of Article 20(3) of the Constitution. Specimen such as signature, thumb impression, impression of the palm or foot or fingers, or specimen of handwriting, or exposing parts of his body by an accused, or voice samples of the accused for the purposes of investigation, as has been iterated and re-iterated in plethora of Supreme Court judgments, can be taken from the accused amidst the process of investigation. Although it may amount to furnishing of evidence in the larger sense, it would not in itself be self-incriminating per se. These are some of the notable developments and reflect the changing contours of the right against self-incrimination.

Meanwhile, to enforce the right of accused, the right to privacy has been a recent addition as a fundamental right, being implicit aspect of right to life and personal liberty under Article 21.⁴ Owing to these peripheral developments in the field of both science and law, the researcher seeks to study on the changing contours of the right against self-incrimination in India in the pretext of development of forensic psychological tests and psychiatric evaluation.

³ Art. 20, 21 and 22, the Constitution of India

⁴ *Justice K. S. Puttaswamy (Retd.) v. Union of India*, (2017) 10 SCC 1

The researcher seeks to undertake a study on the emerging practices of forensic psychological tests and psychiatric evaluation methods that profoundly impacts the Constitutional protection and privilege against self-incrimination in India, as well as in other criminal justice systems, so as to reflect on the global development as to the relevancy and admissibility of forensic psychological tests. The pertinent problem undertaken is to analyse the self-incriminating aspect of forensic psychological tests and psychiatric evaluation and their potential tendency to directly impact and dilute the right against self-incrimination.

1.3. Research Aim

The aim of this research work is to examine and study the changing contours of right against self-incrimination in India with the advent of forensic psychological tests and psychiatric evaluation, giving rise to various scientific and per se non-coercive methods of investigation to elicit the real and objective version of events.

The present investigation further aims to study on the application and authenticity of various methods of forensic psychological tests and psychiatric evaluation which are commonly considered and adopted in Indian and other criminal justice systems. It aims to delve upon the relevancy and admissibility of these tests in national and international perspective. It also deals with the Constitutional and legislative backdrop of the right against self-incrimination. Most importantly, the research work aims to study the changing contours of right against self-incrimination in India after the advent of scientific methods of investigation in this realm.

1.4 Research Objectives

The objectives of the Research work are as follows:

- (1) To study the Constitutional and legislative framework of Right against self-incrimination in India and other Criminal justice systems.
- (2) To examine the development of various Forensic Psychological Tests and Psychiatric methods of investigation.
- (3) To examine the authenticity and invasiveness of Forensic Psychological Tests.

- (4) To study the relevancy, admissibility and legal status of Forensic Psychological Tests and Psychiatric methods of investigation in India and other Legal systems.
- (5) To study the effect of forensic psychological tests on the Right against self-incrimination in India.
- (6) To suggest measures to effectively balance the Fundamental Right against self-incrimination and efficient investigation through scientific tests.

1.5. Scope and Limitations

The scope of this Research work is to analyse the changing contours of Right against self-incrimination in India with the advent and recognition of forensic psychological tests and other psychiatric methods. It also seeks to highlight on the development of various forensic psychological tests and psychiatric evaluation methods that aid in the process of investigation and the legal status of the aforesaid national and international perspective. Crucially, the work seeks to reflect on the changing contours of Right against self-incrimination in India owing to the development of forensic psychological tests and psychiatric methods and suggests an amicable balance between the two desired ends, if required.

The sanctity of Forensic psychological tests as an infallible scientific method of investigation will not be tested in this research work. The limitation of the research work is that it does not deal with the scientific, biological, or psychological impact that these Forensic psychological tests may have on the accused or the person it is subjected to. The research work confines itself only to the legal implications of the various forensic psychological tests and the potential scarring of the constitutional right against self-incrimination owing to the advent and application of these tests. The scientific basis of the tests is beyond the scope of this study.

1.6. Research Gap

The available literature on the subject of self-incrimination and forensic psychological tests has been very helpful. A plethora of literature has thrown light on the Constitutional and legislative framework as regards the privilege of self-incrimination in India.

However, no comprehensive study has been done on the various forensic psychological tests and the direct impact it has in dilution of the privilege against self-incrimination, which is a fundamental right guaranteed to citizens of India under Art. 20(3) of the Constitution of India. Furthermore, no study has been undertaken on the legal status of forensic psychological tests that are prevalently practised in India and the greater need for informed consent in cases where these tests are used.

1.7. Literature Review

Researcher has gone through a considerable number of published research papers, books and has reviewed articles on the topic of research.

1.7.1. Published Papers

1.7.1.1. Devi⁵

The research work is a noteworthy evaluation of the Right against Self-Incrimination in India. It also deals with the concept of Right against self-Incrimination and its applicability in the United Kingdom and United States of America. The research work takes into account the legislative and judicial trend of Right against Self-Incrimination in India in a comprehensive manner. It also undertakes a holistic analysis of concepts such as testimonial compulsion, prerogatives of police in the course of interrogation and investigation, right to silence, search and seizure and matters peripheral to the privilege against self-Incrimination in India.

1.7.1.2. Anushree⁶

The research work elaborately deals with the international conventions in relation to human rights of the accused and its application in Indian setting. It elaborately deals with the development and evolution of forensic psychological tests such as polygraph, Neuro-imaging tests, Narco-Analysis as well as the legal status of the aforesaid in national and international perspective. The research work critically deals with the evidentiary barriers which are requisite for a fair trial and its direct impact on the admissibility of these forensic psychological tests.

1.7.1.3. Verma⁷

⁵ Sushila Devi, *Right Against Self Incrimination in India: A Study of Legislative and Judicial Trends* (2005)

⁶ A. Anushree, *Forensic Psychological Tests and Human Rights of the Accused: With Special Reference to Right against Self Incrimination and Right to Fair Trial* (2018)

⁷ Sandhya Verma, *Emerging Technologies and their Application in the Indian Criminal Justice System with Special Reference to DNA Profiling, Narco-Analysis and Polygraph Test: An Appraisal* (2015)

The research work undertakes a conceptual analysis and a panoramic view of forensic science and its relevancy in crime investigation. It elaborately deals with the various modern techniques such as Narco-Analysis, Polygraph, Brain-Mapping, DNA Profiling, Brain and Ballistic Fingerprinting in forensic science and their utility as well as efficacy in the criminal justice system. The research work seeks to study the nexus between the application of these tests and its potential benefits in upholding human rights.

1.7.1.4. Chaudhary⁸

The research work deals with the applicability of scientific evidence along with its historical background. It extensively covers the theoretical aspects of Narco-Analysis, Polygraph and Brain-Mapping as well as their relevancy and admissibility in national and international setting. It also deals with the jurisprudential norms enumerated in the Selvi Judgment,⁹ as well as the guidelines issued by the National Human Rights Commission as regards the applicability and admissibility of these tests in India.

1.7.1.5. Srivastava¹⁰

The research work deals with the Right against self-incrimination in a holistic manner. It elaborately deals with the history and development of this right, as well as its manifestation in the international human rights law. It also delves into the application of right against self-incrimination in India and other legal systems. The research work also briefly discusses the advanced scientific techniques and its direct impact on the right against self-incrimination in national and international perspective. It also makes a comprehensive analysis on the role played by the Indian judiciary in the realm of scientific tests and right against self-incrimination.

1.7.2. Books

1.7.2.1. Narco-Analysis, Brain- Mapping, Hypnosis and Lie Detector Tests in Interrogation of Suspect¹¹

⁸ Arvindeka Chaudhary, *Admissibility of Scientific Evidence under Indian Evidence Act, 1872: A Study with Special Reference to Narco Analysis, Polygraph and Brain Mapping* (2014)

⁹ Smt. Selvi & Ors. v. State of Karnataka, AIR 2010 SC 1974

¹⁰ Siddharth Srivastava, *Constitutional Protection against Self-Incrimination: Human Rights Perspective* (2018)

¹¹ Satyendra Kumar Kaul and Mohd. Hasan Zaidi, *NARCO-ANALYSIS, BRAIN- MAPPING, HYPNOSIS AND LIE DETECTOR TESTS IN INTERROGATION OF SUSPECT* (2008), Alia Law Agency, Allahabad

The authors in this book have analysed modern scientific techniques exhaustively and its legality one by one. This book defines each scientific evidence, procedure of conducting these tests and law prevalent in various countries. In this book authors have peeped deep into historical aspect of evidence. They have discussed how term 'evidence' came into existence, meaning of the term 'science', application of science in medico-legal stream, meaning of scientific evidence and how far scientific evidence is admissible in India and other countries.

1.7.2.2. Medical Jurisprudence and Toxicology¹²

The book deals with forensic science, its history, legal procedure, medical witnesses and evidences. Author has given reference of various case laws wherein science is used in daily routine in courts of law. Various scientific tests that are conducted to detect age, cause of death, method of causing death, etc.

1.7.2.3. Medical Jurisprudence and Toxicology¹³

This book deals with criminal procedure, medical experts, etc and has laid down a number of cases relating to relation of medical science with courts of law and criminal justice system. Author has given reference that science is used regularly in one way or other in courts of justice. Investigation is dependent on science.

1.7.2.4. Medical Jurisprudence and Toxicology¹⁴

In the book, an entire chapter is dedicated on forensic tests such as Polygraph, Brain Mapping and Narco-analysis. Author has given traced the history of such tools, how they are conducted, uses of such techniques and that they are inadmissible in the courts of law.

1.7.2.5. Principles of Forensic Science¹⁵

The book gives precise knowledge about forensic medicine, legal procedures in medico legal cases, legal aspects of practice of medicine. Author has stated that courts of law are incomplete without forensic science. It is tools of forensic science only that help courts to arrive at correct decision and in efficient distribution of justice.

¹² Jaising P. Modi, MEDICAL JURISPRUDENCE AND TOXICOLOGY (2008), New Delhi: LexisNexis

¹³ Abhijit Rudra, Isidore Bernadotte Lyon, and Tirath Das Dogra, MEDICAL JURISPRUDENCE AND TOXICOLOGY (2008), Delhi Law House

¹⁴ Nayan Joshi, MEDICAL JURISPRUDENCE AND TOXICOLOGY, New Delhi: Kamal Publishers

¹⁵ Apurba Nandy, PRINCIPLES OF FORENSIC MEDICINE, CALCUTTA: New Central Book Agency

1.7.2.6. Police Diaries; Statements, Reports and Investigations with special reference to Scientific Evidence, DNA, Brain-Mapping Tests, Narco-analysis, Forensic Science and Cyber Crimes¹⁶

This is a book which gives precise information about the scientific tools of investigation, how police authorities use them to apprehend criminals, how scientific tools of investigation assist courts and still some of the modern techniques are regarded inadequate and unreliable.

1.7.3. Articles

1.7.3.1. Scientific Techniques of Obtaining Evidence¹⁷

In this article, author has discussed various scientific techniques of obtaining evidence including Polygraph, Narco-analysis and Brain-Mapping in the light of Constitution of India.

1.7.3.2. Narco-analysis Test- Violative of Doctrine of Self Incrimination¹⁸

In this article, author asserted that Narco-analysis is against the notion of liberty, humanity and fundamental rights and will not be an effective tool for crime detection.

1.7.3.3. Narco-analysis - Legal and Human Right Aspects¹⁹

In this article, author has pointed out obstacles in the way of Narco-analysis. Author has also referred various case laws that go in favour of Narcoanalysis and has concluded that law should also change according to the needs of the society.

1.7.3.4. Narco-analysis and Article 20(3): Blending the Realm of Individuals and Societal Rights²⁰

In this article, the author has discussed the philosophy behind right against self-incrimination and position of Narco-analysis in U.S.A and concluded that in order to resolve the conflict, there is need to give wider interpretation to Article 20(3).

¹⁶ P. Venkatesh, POLICE DIARIES; STATEMENTS, REPORTS AND INVESTIGATIONS WITH SPECIAL REFERENCE TO SCIENTIFIC EVIDENCE, DNA, BRAIN-MAPPING TESTS, NARCO-ANALYSIS, FORENSIC SCIENCE AND CYBER CRIMES, Allahabad: Premier Publishing Company, 2008

¹⁷ Bimaldeep Singh, SCIENTIFIC TECHNIQUES OF OBTAINING EVIDENCE, The Law Journal of Guru Nanak Dev University, Vol. XVII, 2009, pp. 89-102

¹⁸ Hari Dutt Sharma, NARCO-ANALYSIS TEST- VIOLATIVE OF DOCTRINE OF SELF INCRIMINATION, Criminal Law Journal, October 2009, pp. 273-275

¹⁹ K.O. Swapna, NARCO-ANALYSIS- LEGAL AND HUMAN RIGHT ASPECTS, *Civil and Military Journal*, pp. 208-216

²⁰ Tathagata Choudhury, NARCO-ANALYSIS AND ARTICLE 20(3): BLENDING THE REALM OF INDIVIDUALS AND SOCIETAL RIGHTS, *Criminal Law Journal*, January 2010, pp. 28-32.

1.8. Research Questions

- (1) What is the underlying rationale of Right against self-incrimination in a civilised criminal jurisprudence?
- (2) What are the recent scientific developments in the field of forensic psychological tests and psychiatric evaluation in criminal justice system?
- (3) Whether the information derived from forensic psychological tests and psychiatric evaluation amount to testimonial compulsion?
- (4) What is the judicial response on admissibility of evidence collected through forensic psychological tests?
- (5) Whether the forensic psychological tests should be outrightly banned or adopted with proper safeguards and measures?

1.9. Significance of the Study

The present study is an attempt to analyse the need of advance and latest scientific methods of investigation. As criminals are getting technology-savvy, the various deception-detecting techniques are very helpful in exhuming the truth from sophisticated as well as from hard-core criminal especially when it comes to white-collar crimes; police are increasingly looking to forensics to help them in the course of their investigation.

Irony of modern jurisprudence is that there are many to defend the rights of the accused while none to defend the public cause and interest. In the light of this, forensic tests do come to picture as a reasonable solution. But the pertinent question in this regard is that, whether forensic tests are advanced enough to prove dependable and whether it is a ripe time for laws to be amended to inculcate such techniques. The researcher has undertaken the study to understand the rationale of right against self-incrimination, and whether the admissibility of forensic techniques has the potential to violate the cherished right of the accused and an imperative aspect of civilised criminal jurisprudence.

1.10. Research Methodology

The researcher has adopted the doctrinal method of study for the purpose of completion of this research work. An extensive literature survey and documentary analysis was carried out to understand the privilege against self-incrimination as applicable in India and its changing contours with the advent of newer and scientific methods of investigation. The study is analytical and interpretative in nature.

Secondary sources like journals, articles, online databases and reports have been made used in the research study.

The researcher has adopted the Standard Indian Legal Citation for citing the various references used in the study.

CHAPTER 2

PREVALENCE OF RIGHT AGAINST SELF-INCRIMINATION IN INDIA AND OTHER LEGAL SYSTEMS

2.1. Meaning and Definition of Right against Self-Incrimination

The Right against self-incrimination is a fundamental canon of common law criminal jurisprudence. The characteristic features of this principle are – (i) That the accused is presumed to be innocent, (ii) That it is for the prosecution to establish his guilt, and (iii) That the accused need not make any statement against his will.

The Right against self-incrimination enables the maintenance of human privacy in the enforcement of criminal justice and also paramount to apply the principles of natural justice in criminal proceeding. The fundamental values underlying the privilege are to protect the persons suspected of crime to cruel trilemma of self-accusation, perjury or contempt; preference to accusatorial than inquisitorial system of criminal justice; to prevent inhuman treatment and abuses, to maintain fair state versus individual balance, to protect the inviolability of human personality and the right of each individual to private enclave whereby he may lead a private life and to protect from self-deprecatory statements. It is also stated that, the privilege also has in its objective to ensure voluntariness and reliability of the evidence.

It is a fundamental principle of the common law that a person accused of an offence shall not be compelled to discover documents or objects which incriminate himself. No witness, whether party or stranger is, except in a few cases, compellable to answer any question or to produce any documents the tendency of which is to expose the witness (or the wife or husband of the witness), to any criminal charge, penalty or forfeiture.

According to Black's Law Dictionary,²¹ Self-incrimination means “the acts of indicating one's own involvement in a crime or exposing oneself to prosecute, esp. by making a statement”.

According to Barron's Law Dictionary, Self-incrimination means privilege against the constitutional right of a person to refuse to answer questions or otherwise give testimony against himself or herself which will subject him or her to self-incrimination.

²¹ Black's Law Dictionary, 8th Ed., 2004, P. 1391

According to The Law Lexicon, the Encyclopedic Law Dictionary, Self-incrimination means “acts or declaration driving interrogating agency or by way of statement before a magistrate either before or during trial”.

According to Legal Thesaurus Dictionary, Self-incrimination means “acts or declaration by which one incriminates oneself in a crime; giving criminal evidence against oneself”.

In *State of Bombay v. Kathi Kalu Oghad*,²² the honourable Supreme Court defines self-incrimination as “...conveying information based upon the personal knowledge of the person given and does not include the mere mechanical process of producing documents in court which do not contain any statement of the accused based on his personal knowledge”.

In other words, self-incrimination means “acts or declaration by which a person explicitly or implicitly admits his connection with a crime, driving interrogation by the investigating agency or by way of statement before trial or during trial”²³

2.2. Underlying Rationale of the Right against Self-Incrimination

The ‘right against self-incrimination’ is now viewed as an essential safeguard in criminal procedure. Its underlying rationale broadly corresponds with two objectives - firstly, that of ensuring reliability of the statements made by an accused, and secondly, ensuring that such statements are made voluntarily.²⁴

It is quite possible that a person suspected or accused of a crime may have been compelled to testify through methods involving coercion, threats, or inducements during the investigative stage. When a person is compelled to testify on his/her own behalf, there is a higher likelihood of such testimony being false. False testimony is undesirable since it impedes the integrity of the trial and the subsequent verdict. Therefore, the purpose of the ‘rule against involuntary confessions’ is to ensure that the testimony considered during trial is reliable. The premise is that involuntary statements are more likely to mislead the judge and the prosecutor, thereby

²² *State of Bombay v. Kathi Kalu Oghad*, AIR 1961 SC (1808)

²³ Justice Malik, *Commentary on Law of Fundamental Rights*, p. 4284, 4th Edition, 2009, Delhi Law House

²⁴ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

resulting in a miscarriage of justice. Even during the investigative stage, false statements are likely to cause delays and obstructions in the investigation efforts.

The concerns about the ‘voluntariness’ of statements allow a more comprehensive account of this right. If involuntary statements were readily given weightage during trial, the investigators would have a strong incentive to compel such statements - often through methods involving coercion, threats, inducement, or deception. Even if such involuntary statements are proved to be true, the law should not incentivise the use of interrogation tactics that violate the dignity and bodily integrity of the person being examined. In this sense, ‘the right against self-incrimination’ is a vital safeguard against torture and other ‘third-degree methods’ that could be used to elicit information. It serves as a check on police behaviour during the course of investigation. The exclusion of compelled testimony is important, otherwise the investigators will be more inclined to extract information through such compulsion as a matter of course.

The frequent reliance on such ‘short-cuts’ will compromise the diligence required for conducting meaningful investigations. During the trial stage, the onus is on the prosecution to prove the charges levelled against the defendant and the ‘right against self-incrimination’ is a vital protection to ensure that the prosecution discharges the said onus. These concerns have been recognised in Indian as well as foreign judicial precedents.²⁵

In *Nandini Satpathy v. P.L. Dani*,²⁶ it was observed that: “Article 20(3) is a human article, a guarantee of dignity and integrity and of inviolability of the person and refusal to convert an adversary system into an inquisitorial scheme in the antagonistic antechamber of a police station. And in the long run, that investigation is best which uses stratagems least, that policeman deserves respect who gives his fists rest and his wits restlessness. The police are part of us and must rise in people’s esteem through firm and friendly, not foul and sneaky strategy.”

2.3. Origin and Development of the Right against Self-Incrimination

The right of refusal to answer questions that may incriminate a person is a procedural safeguard which has gradually evolved in common law and bears a close relation to the ‘right

²⁵ *State of Bombay v. Kathi Kalu Oghad*, [1962] 3 SCR 10, at pp. 43-44

²⁶ *Nandini Satpathy v. P.L. Dani*, (1978) 2 SCC 424

to fair trial'. There are competing versions about the historical origins of this concept. Some scholars have identified the origins of this right in the medieval period. In that account, it was a response to the procedure followed by English judicial bodies such as the Star Chamber and High Commissions which required defendants and suspects to take *ex officio* oaths. These bodies mainly decided cases involving religious non-conformism in a Protestant dominated society, as well as offences like treason and sedition. Under an *ex officio* oath the defendant was required to answer all questions posed by the judges and prosecutors during the trial and the failure to do so would attract punishments that often-involved physical torture. It was the resistance to this practice of compelling the accused to speak which led to demands for a 'right to silence'.

The doctrinal origins of the right against self- incrimination could be traced back to the Latin maxim 'Nemo tenetur seipsum prodere' (i.e., no one is bound to accuse himself) and the evolution of the concept of 'due process of law' enumerated in the Magna Carta.²⁷ The use of the *ex officio* oath by the ecclesiastical courts in medieval England had come under criticism from time to time, and the most prominent cause for discontentment came with its use in the Star Chamber and the High Commissions.

Most scholarship has focussed on the sedition trial of John Lilburne (a vocal critic of Charles I, the then monarch) in 1637, when he refused to answer questions put to him on the ground that he had not been informed of the contents of the written complaint against him. John Lilburne went on to vehemently oppose the use of *ex-officio* oaths, and the Parliament of the time relented by abolishing the Star Chamber and the High Commission in 1641. This event is regarded as an important landmark in the evolution of the 'right to silence'.

However, in 1648 a special committee of Parliament conducted an investigation into the loyalty of members whose opinions were offensive to the army leaders. The committee's inquisitional conduct and its requirement that witnesses take an oath to tell the truth provoked opponents to condemn what they regarded as a revival of Star Chamber tactics. John Lilburne was once again tried for treason before this committee, this time for his outspoken criticism of the leaders who had prevailed in the struggle between the supporters of the monarch and those of the Parliament in the English civil war.

²⁷ Art. 39, Magna Carta, 1215

John H. Langbein has offered more historical insights into the emergence of the ‘right to silence’.²⁸ He draws attention to the fact that even though ex officio oaths were abolished in 1641, the practice of requiring defendants to present their own defence in criminal proceedings continued for a long time thereafter. The Star Chamber and the High Commissions had mostly tried cases involving religious non-conformists and political dissenters, thereby attracting considerable criticism. Even after their abolition, the defendants in criminal courts did not have the right to be represented by a lawyer (‘right to counsel’) or the right to request the presence of defence witnesses (‘right of compulsory process’). Hence, defendants were more or less compelled to testify on their own behalf. Even though the threat of physical torture on account of remaining silent had been removed, the defendant would face a high risk of conviction if he/she did not respond to the charges by answering the material questions posed by the judge and the prosecutor. In presenting his/her own defence during the trial, there was a strong likelihood that the contents of such testimony could strengthen the case of the prosecution and lead to conviction. With the passage of time, the right of a criminal defendant to be represented by a lawyer eventually emerged in the common law tradition. A watershed in this regard was the Treason Act of 1696 which provided for a ‘right to counsel’ as well as ‘compulsory process’ in cases involving offences such as treason. Gradually, the right to be defended by a counsel was extended to more offences, but the role of the counsel was limited in the early years. For instance, defence lawyers could only help their clients with questions of law and could not make submissions related to the facts.

The judgment in *Nandini Satpathy v. P.L. Dani*,²⁹ referred to the following extract from a decision of the US Supreme Court in *Brown v. Walker*,³⁰ which had later been approvingly cited by Warren, C.J. in the landmark *Miranda v. Arizona case*,³¹ as provided under: “The maxim ‘nemo tenetur seipsum accusare’ had its origin in a protest against the inquisitorial and manifestly unjust methods of interrogating accused persons, which have long obtained in the continental system, and, until the expulsion of the Stuarts from the British throne in 1688, and the erection of additional barriers for the protection of the people against the exercise of arbitrary power, were not uncommon even in England. While the admissions or confessions of the prisoner, when voluntarily and freely made, have always ranked high in the scale of

²⁸ John H. Langbein, ‘The historical origins of the privilege against self- incrimination at common law’, 92(5) Michigan Law Review 1047-1085 (March 1994)

²⁹ *Nandini Satpathy v. P.L. Dani*, (1978) 2 SCC 424, at pp. 438-439

³⁰ *Brown v. Walker*, 161 US 591 (1896)

³¹ *Miranda v. Arizona*, 384 US 436 (1966)

incriminating evidence, if an accused person be asked to explain his apparent connection with a crime under investigation, the case with which the questions put to him may assume an inquisitorial character, the temptation to press the witness unduly, to browbeat him if he be timid or reluctant, to push him into a corner, and to entrap him into fatal contradictions, which is so painfully evident in many of the earlier state trials, notably in those of Sir Nicholas Throckmorton, and Udal, the Puritan minister, made the system so odious as to give rise to a demand for its total abolition. The change in the English criminal procedure in that particular seems to be founded upon no statute and no judicial opinion, but upon a general and silent acquiescence of the courts in a popular demand. But, however adopted, it has become firmly embedded in English, as well as in American jurisprudence. So deeply did the inequities of the ancient system impress themselves upon the minds of the American colonists that the State, with one accord, made a denial of the right to question an accused person a part of their fundamental law, so that a maxim, which in England was a mere rule of evidence, became clothed in this country with the impregnability of a constitutional enactment.”

2.4. Right against Self-Incrimination under International Human Rights Law

The concept of Human Rights of the accused gained momentum after the two world wars, especially after the birth of United Nations. The UN Charter reaffirmed its faith in fundamental human rights and UN Declaration proclaimed in unequivocal terms “universal respect for the observance of Human Rights for all without distinction as to race, language, sex or religion.”

Thus, after the coming into force of UN Charter and UN Declaration of Human Rights, a constitutional basis for the right of the accused emanated. Apart from the Charter and Universal Declaration of Human Rights, rights of the accused are also found expression in International Covenant on Civil and Political Rights, 1966, International Covenant on Economic Social and Cultural Rights, 1966, and other Human Rights instruments.

In most of the international human rights instruments, the Right against self-incrimination is recognized. Right against self-incrimination is a legal right of any person subjected to police interrogation or summoned to go to trial in a court of law. This right is recognized, explicitly or by convention, in many of the world's legal systems as well.

2.4.1. Universal Declaration of Human Rights, 1948

The major attributes of a fair criminal trial are enshrined in Article 10 and 11 of the Universal Declaration of Human Rights.

The Universal Declaration of Human Rights reads “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 defense”.³²

Furthermore, it purports that every person is entitled to full equality, to fair and public hearing by an independent and impartial tribunal in the determination of his Rights and Obligation of any criminal Charge Against him.³³

2.4.2. The International Covenant on Civil and Political Rights, 1966

The International Covenant on Civil and Political Rights guarantees the right of everyone “not to be compelled to testify against himself or confess guilt.”³⁴

The Human Rights Committee, which is a body of Independent Experts responsible in monitoring, implementation and interpretation of the International Covenant on Civil and Political Rights 1966, held that the right under Article 14(3) (g) must be understood in terms of the absence of any direct or indirect physical or psychological pressure from the investigating authorities on the accused, with a view to obtain a confession from the accused. International criminal law has also given much prominence to right to silence. The Rules of Procedure and Evidence adopted by the Criminal Tribunals established by UN Security Council for the Former Yugoslavia and Rwanda provide expressly, the right to silence during investigation stage.³⁵

The Rome Statute not only confers right to silence but also provides that silence cannot be considered in the determination of guilt or innocence.³⁶

³² Art. 11.1, The Universal Declaration of Human Rights

³³ Art. 10, The Universal Declaration of Human Rights

³⁴ International Convention on Civil and Political Rights 1966, Art. 14(3) (g).

³⁵ Rules of Procedure and Evidence, 1995, International Criminal Tribunal for Rwanda, Rule 42 and Rules of Procedure and Evidence, 2001, International Criminal Tribunal for the Former Yugoslavia, Rule 42.

³⁶ Rome Statute of the International Criminal Court 1998, Art. 66 (presumption of innocence) and Art.67 (Right to remain silent, without such silence being a consideration in the determination of guilt or innocence).

2.4.3. American Convention on Human Rights

The Right against self-incrimination is also recognized in American Convention on Human Rights, 1969,³⁷ which purports that "...During the proceedings, every person is entitled, with full equality, to the following minimum guarantees: the right not to be compelled to be a witness against himself or to plead guilty; A confession of guilt by the accused shall be valid only if it is made without coercion of any kind."

Right against self-incrimination also finds expression in the constitution and statutes of many common law countries. The Fifth Amendment of US constitution, Section 11(c) of The Canadian Charter of Rights and Freedom, 1982, Section 25(d) of The New Zealand Bill of Rights, 1990 and in Human rights statutes in Australia like Human Rights Act, 2004; Charter of Human Rights and Responsibilities Act, 2006, S. 22(2)(i) and S. 25(2)(k) and in UK, in Human Rights Act, 1998 are some of the instances wherein the privilege against self-incrimination has been duly inculcated.

Thus, it may be stated that as per the international human rights instruments a suspect must in no time and in no circumstances, be compelled to incriminate himself or to confess guilt and that he has the right to remain silent at all times.³⁸

2.5. Right against Self-Incrimination in India

The Right against self-incrimination is a fundamental principle in our adversarial system of justice. It helps rectify the State versus Individual balance by maintaining the presumption of innocence until proven guilty. The Constitution of India, which embodies the Right against self-incrimination has clearly laid down that no person accused of any offence shall be compelled to be a witness against himself.³⁹

In the case of *Nandini Sathpathy v. P.L. Dani*,⁴⁰ it was held that no one could forcibly extract statements from the accused that have the right to keep silent during the course of interrogation or investigation. However, Art. 20(3) can be waived of by a person himself. The idea behind the protection against self-incrimination is to encourage a free atmosphere in which the

³⁷ American Convention on Human Rights 1969, Art. 8(2)(g)

³⁸ Office of High Commissioner of Human Rights

³⁹ Art. 20(3), the Constitution of India

⁴⁰ *Nandini Sathpathy v. P.L. Dani*, (1978) 2 SCC

accused can be persuaded to come forward to furnish evidence in courts and be of substantial help in elucidating truth in a case, with reference to material within their knowledge and in their possession. Anything caused, by any kind of threat or inducement by a person directed towards the accused or likely to be accused of any offence, which causes him to act involuntarily and further the case against himself in any prosecution against him or which results or is likely to result in the incrimination of that person qua any offence, is violative of the fundamental right guaranteed under clause (3) of Article 20 of the Constitution of India.

2.5.1. Constituent Assembly Debates

The principle of guaranteeing every person protection against self-incrimination was provided for in K.M. Munshi's draft in Article XII, Clause (2),⁴¹ which provided, inter alia: "No person shall be...compelled in any criminal case to be witness against himself; nor shall the burden of proving his innocence be thrown on him."

The sub-committee on fundamental rights considered, this clause on March 28, 1947 and deleted the last part (nor shall the burden of proving his innocence be thrown on him) of this clause. The sub-committee adopted it on April, 15, 1947 and incorporated in its report to the Advisory Committee as Clause 27(5). When the Advisory Committee took up this clause for consideration on April 22, 1947 Rajagopalachari remarked that this protection was not necessary to put in the general principles of criminal law as a fundamental right in the constitution.

In reply, K.M. Munshi purported that while it was true that generally criminal laws were passed by the legislature, the clause was intended to be a safeguard against a specific grievance. The Advisory Committee adopted the clause as recommended by the Sub-Committee, without further annexure to its interim report to the constituent Assembly.

The clause was taken up for consideration as adapted by the Assembly on May 2, 1947 without any discussion. In reproducing it as clause 26 of draft constitution, the Constitutional advisor to the Constituent Assembly, Sir B. N. Rau recommended that the protection against oneself should be qualified by the provision of section 132 of the Indian Evidence Act 1872, by a

⁴¹ B. Shiva Rao., *The framing of Indian Constitution: select comments*, 79 (Indian Institute of Public Administration, New Delhi, (Vo1.11. 1967).

suitable addition of words. He explained that while depriving a witness of the right to refuse to answer questions on the ground that the answer would incriminate him, Section 132 of the Indian Evidence Act also provided that no such answer should subject him to any criminal charge except prosecution for giving false evidence in the cause of justice, as also the benefit of protection to a witness against incrimination. In the absence of a saving provision of this kind, the clause might lead to failure of justice, particularly in criminal cases.

The drafting committee considered clause 26 of the Constitutional Adviser's Draft Constitution on November, 1, 1947 and held that the intention of the second part of sub clause (2) was only to prohibit compulsion of an accused to be a witness against himself and if that intention was made clear, the additional words proposed by the Constitutional Advisor would not be necessary. The committee split up sub clause (2) into two independent clauses, the former dealing with "double jeopardy" and the latter with "self-incrimination" and these provisions appeared as Article 14 of Draft Constitution.

This clause eventually became Article 20(3) of the Constitution as emerged out of the Constituent Assembly. In other words, it was for the first time by the Constitution of India under Article 20(3), that a limited protection has been conferred upon a person charged with the Commission of an offence against self-incrimination by affording him protection against testimonial compulsion.

The sanctity of the doctrine was well known to the framers of the Indian Constitution and hence, it was given due place by placing it in part-III of the Fundamental Rights in the Constitution of India. It is submitted that the protection against self-incrimination as incorporated in the Constitution of India is designed mainly in order to stimulate the police and prosecution into a search for a most dependable evidence procurable by their own efforts, otherwise there would be an incentive to rely solely upon the less dependable admissions that might be obtained during the course of compulsory interrogation. It is based on the policy of encouraging persons to come forward with evidence in courts of justice by protecting them as far as possible from injury or needless annoyance, as in consequence of so doing the accused person need not make any statement against his will. However, the rule in India is narrower than the Anglo-American rule, and this right has been confined to "persons accused of any offence" only. The witness has been left untouched by the Constitution of India and continues

to be governed by Section 132 of the Indian Evidence Act, 1872. Furthermore, the right does not apply to civil proceedings or to proceedings which involve imposition of penalties or forfeitures.

2.5.2. Constitution of India

The Right against self-incrimination is a fundamental principle in our adversarial system of justice. It helps rectify the State versus Individual balance by maintaining the presumption of innocence until proven guilty. The Constitution of India, which embodies the Right against self-incrimination has clearly laid down that no person accused of any offence shall be compelled to be a witness against himself.⁴²

Clause (3) of Article 20 of Indian Constitution talks about self-incrimination. It provides “No person accused of any offence shall be compelled to be a witness against himself.” This clause is based on the legal maxim ‘nemo tenetur prodere accusare seipsum’, which means that no man is bound to accuse himself. Making of any statement that has possibility of exposing the accused to criminal prosecution, either at present or in future is not permitted under the Constitution. This provision is inspired from the 5th Amendment of the United States Constitution that prohibits the government from forcing any person to produce any sort of evidence that would incriminate that person.

On analysis, this provision contains the following components, all of which must co-exist before the protection of Art. 20(3) can be claimed, as purported under:

- (i) It is a right available to a person ‘accused’ of an offence
- (ii) It is a protection against ‘compulsion’ to be a witness
- (iii) It is a protection against such ‘compulsion’ to give evidence ‘against himself’

The protection from self-incrimination under the Constitution of India extends only to person accused of an offence in a criminal proceeding. It does not extend to witnesses or to civil proceedings. In this respect, our law differs from the English law as well. Under the English law, not only an accused in a criminal proceeding is protected from answering question, which may tend him to criminate prosecution or any other penalty, or forfeiture, but the same protection is extended towards the witnesses as well. However, the scope of this immunity

⁴² Art. 20(3), the Constitution of India

has, prima facie, been widened by our Supreme Court by interpreting the word 'witness' to comprise both oral and documentary evidence which is likely to support a prosecution against him.

Article 20(3) follows the language of Fifth Amendment of the American Constitution, but the scope of our rule is narrower than the American rule, which has received an extended interpretation at the hands of American Courts.

2.5.3. Judicial Decisions on Right against Self-Incrimination in India

The presumption of innocence of the accused in English criminal jurisprudence has basically been the mainstay of this rule in India. The rule casts burden on the prosecution to prove a person guilty and allows the accused to stand by and watch prosecution failing in establishing the charge conclusively and beyond all reasonable doubts. This presumption of innocence gave birth to the rule of immunity from self-incrimination embodied in Article 20(3) of our Constitution. The rule in our Constitution is, however, narrower than the one obtaining in the U.S.A. and the U.K.

It must be noted at the onset that before 1978, the President had powers under Article 359 of the Constitution to suspend the enforcement of any fundamental right guaranteed in Part III of the Constitution of India. Article 359 was amended in 1978,⁴³ and after this amendment the rights guaranteed under Article 20 and 21 cannot be suspended by President.

It goes without saying that the administration of justice and the need to control crime effectively requires the strengthening of the investigative machinery. The Courts have time and again emphasized that it is as much necessary to protect an accused person against being compelled to incriminate himself, as to arm the agents of law and the Courts of law with legitimate powers of bringing offenders to justice. As a result, several types of evidences are excluded from the purview of Article 20(3) with a view to draw a balance between the exigencies of investigation of crimes and the need to safeguard the individual from being subjected to third degree methods. Newer methods of eliciting truth and objective information, based on scientific analysis instead of coercive methods, have emerged which has the potential to change the dynamics of the traditional understanding of privilege against self-incrimination.

⁴³ The Constitution (44th Amendment) Act, 1978

Moreover, Article 20(3) is not applicable in cases where any sort of recovery is made, be that an object or evidence, from the possession of a person.⁴⁴

In *People's Union for Civil Liberties v. Union of India*,⁴⁵ the Hon'ble Supreme Court held that a person becomes witness only when he makes oral or written statements in or out of court relating to any person who is accused of an offence. The giving of any sort of identification as for instance impression of thumb or foot or palm or fingers or giving of specimen of handwriting is not at all covered under Article 20(3). For testimonial compulsion it is essential that a person forwards his personal knowledge about happening or non-happening of an event. The perfunctory practice of producing documents which may throw light on any of the controversial points does not amount to self-incrimination.⁴⁶

In *State of U.P. v. Boota Singh*,⁴⁷ the Apex Court held that if directions are issued to the accused to give his specimen signatures and handwriting that does not amount to testimonial compulsion similar is the case with scientific evidence because accused is just directed to undergo a test not to give a specific statement. It can be termed as a search of the person being conducted by experts and in India search and seizures are not held violative of Article 20(3) because it is not an act of the accused but a third person is doing that act i.e., the police officer or an expert. An accused is obliged to submit to the concerned authority be those police or investigating authority, and therefore, submission of accused to the authorities cannot in any case amount to his testimonial act.⁴⁸

General statements given by any person at some regular inquiry or investigation without formal charges being framed against accused would not attract Article 20(3) even if that statement turns out to be incriminatory at some later stage.⁴⁹

In *Dinesh Dalmia v. State of Maharashtra*,⁵⁰ it was ruled that "Narco-analysis testimony was not by compulsion because the accused may be taken to the laboratory for such tests against his will, but the revelation during such tests is quite voluntary". The Bombay High Court, in

⁴⁴ *M.P. Sharma v. Satish Chandra*, AIR 1954 SC 300

⁴⁵ *People's Union for Civil Liberties v. Union of India*, AIR 2004 SC 456

⁴⁶ *State of Bombay v. Kathi Kalu Oghad*, AIR 1961 SC 1808

⁴⁷ *State of U.P. v. Boota Singh*, AIR 1978 SC 1770

⁴⁸ *State of Gujarat v. Shamlal*, AIR 1965 SC 1251

⁴⁹ *Veera v. State of Maharashtra*, AIR 1976 SC 1167

⁵⁰ *Dinesh Dalmia v. State of Maharashtra*, Cr. L.J. (2006) 2401

Ramchandra Reddy and Ors. v. State of Maharashtra,⁵¹ upheld the legality of the use of P300 or Brain finger-printing, lie-detector test and the use of truth serum or Narco analysis.

Furthermore, Medical Examination of the accused is not barred under Article 20(3),⁵² even drawing of blood samples, pubic hair etc. in the offence of rape, where prosecution has to establish the guilt of accused beyond reasonable doubt is not held to be violative of Article 20(3),⁵³ because right to fair investigation is a fundamental right,⁵⁴ that no victim should be derived to especially in a criminal case. It is humbly submitted that scientific evidence in such a scenario would provide a great help to investigation authorities in exhuming the truth from accused and establishing the guilt beyond reasonable doubt.

In *Ritesh Sinha v. State of Uttar Pradesh*,⁵⁵ the Supreme Court held that the Judicial Magistrate can direct an accused to provide his voice samples for investigation even without his consent.

In *Harjinder Kaur v. State of Punjab*,⁵⁶ the Punjab and Haryana High Court held that subjecting an accused to DNA test does not violate Article 20(3). It is out of question that any infringement of right against testimonial compulsion occurs if the court requires a person male or female to submit to DNA, the courts can do so validly. The question arises that when courts can compel an accused for DNA tests; to give specimen signatures, hand, palm, foot impressions, there should be no hesitation in subjecting accused to Narco-analysis, polygraph and brain mapping tests as these techniques would help in efficient investigations and inquiries by authorities.

In *Usufalli v. State of Maharashtra*,⁵⁷ it was held by Supreme Court, that tape-recording of statements of accused is not violation of Article 20(3) even if the recording is done without consent and knowledge of accused. This recording may be used against accused but it would not attract Article 20(3) reason being there is no presence of compulsion here.

⁵¹ *Ramchandra Reddy and Ors. v. State of Maharashtra*, Cr. W.P (c) No. 1924 of 2003

⁵² *State v. Navjot Sandhu*, (2005) 11 SCC 600.

⁵³ *Halappa v. State of Karnataka*, 2011(7) RCR (Criminal) 29 Karnataka

⁵⁴ *Virbhadra Singh v. State of H.P.*, 2011(1) RCR (Criminal) 396 (Ho.)

⁵⁵ *Ritesh Sinha v. State of Uttar Pradesh*, AIR 2019 SC 3592

⁵⁶ *Harjinder Kaur v. State of Punjab*, 2013(2) RCR (Criminal) 146 (P and H)

⁵⁷ *Usufalli v. State of Maharashtra*, AIR 1968 SC 147

However, in *Smt. Selvi & Ors. v. State of Karnataka*,⁵⁸ which is the authoritative legal position so far as the admissibility of forensic psychological tests in India is concerned, the Hon'ble Supreme Court has held that Narco-analysis, Brain-mapping and polygraph tests cannot be conducted without the consent of accused person. The information derived from such tests would tantamount to testimonial compulsion and as a result, would hit Article 20(3) of the Constitution of India.

2.5.4. Legislative Framework of Right against Self-Incrimination in India

Apart from Article 20(3) of the Constitution, the Criminal Procedure Code, 1973 and Indian Evidence Act, 1872,⁵⁹ provides for right against self-crimination and this right is available not only during trial but even during investigation. The right is of wider amplitude and is a non-derogable right.

2.5.4.1. Indian Evidence Act, 1872

Section 27 of the Indian Evidence Act, 1872 recognizes the presumption that when the accused alone gives information which was hitherto not known and recovery is made pursuant to the said disclosure, the court can presume existence of fact which is likely to have happened having regard to the common course of the natural events, human conduct and private and public witness in their relations to the facts of the particular case.

Essential requirements of Section 27 are provided as under:

- (1) Accused is in police custody.
- (2) Accused makes a statement.
- (3) Accused's statement leads to discovery of a fact.

If all of above requirements are fulfilled, then statement of accused is admissible even if it is incriminating. If during the investigation of a crime by the police, accused person gives information and in pursuance of such an information, discovery is made within the meaning of Section 27 of the Evidence Act, such information and the discovery made as a result of the information is admissible in the court of law even though it may tend to incriminate the person giving the information, while in police custody.

⁵⁸ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

⁵⁹ Ss. 24-27, the Indian Evidence Act, 1872

These propositions emanate from an apprehension that if compulsory examination of an accused were to be permitted, then force and torture may be used against him to entrap him into fatal contradictions. The privilege against self-incrimination thus enables the maintenance of human privacy and observance of civilised standards in the enforcement of criminal justice.

In *Narayan Debnath v. State of Assam*,⁶⁰ the accused made a disclosure statement to the police. He stated that he has buried the dead body of the victim on the bank of a pond. Police discovered the dead body from the bank of the pond and statement of the accused was held to be admissible.

Considering the viewpoint of various law Courts of India, it is safe to say that Section 27 of Indian Evidence Act, 1872 greatly facilitate evidence adduced by scientific tools as it lays down that any information given or obtained in the process of investigation which is confirmed by the finding of any object or fact is admissible in the court. Recovery made even by undesired means is no bar to its use in court. If scientific techniques are taken into consideration, these are not at all illegal or unlawful. Once recovery is made with the help of scientific tools and techniques, prosecution can easily establish the close link between discovery of a material object and its use in the commission of an offence. Thus, use of Narco-analysis, polygraph and brain-mapping would greatly facilitate investigation authorities that too in a scientific manner without requiring authorities to take resort to inhumane treatment.

It is now settled law that hair and nails of the accused can be taken for utilization during investigation even if the accused does not agree to the same. If that invasion of the person of the accused is permissible, the same principle should be applicable to Narco-analysis, Brain-mapping and polygraph test.⁶¹ These tests are always conducted by experts who are especially skilled in this field so they should be treated normally under section 45 as other “expert evidence”. These scientific tests are like taking MRI or C.T. scan. The scientific value has to be evaluated only during the course of trial.⁶² These are neutral type of evidence and must not be discarded.

⁶⁰ *Narayan Debnath v. State of Assam*, 2010 CrLJ 275

⁶¹ *Abhay Singh v. State of U.P.*, 2009 G.L.J. 2189

⁶² *Dinesh Dalmia v. State*, 2006 Cr. L.J. 2401

2.5.4.2. Code of Criminal Procedure, 1973

A recent amendment to the Code of Criminal Procedure, 1973 in the year 2005 is positive and protective towards the recognition of scientific tests. Section 53 empowers the investigative agencies to take recourse to an efficient and scientific method of investigation. Under this section medical examination of accused can be done at the request of police officer and this would be part and parcel of investigation process only. This could be done even after framing of the charge by the court. In fact, under Section 53A, the words “DNA test” has been specifically included.

In a recent case of *Maghar Singh v. State of Punjab*,⁶³ it was held by the court that consent of accused is not required in medico-legal examination of accused under section 53 and 53A of Code of Criminal Procedure, 1973. Section 53 and 53A of Code of Criminal Procedure, 1973 permits the investigation officer to arrest the accused and if he finds that some evidence could be made available from the body of the accused, then he could get him medico-legally examined.

2.6. Right against self-incrimination in other Legal systems

2.6.1. United States of America

In The United States, the Fifth Amendment relates to the fundamental right against self-incrimination and contains, more or less, the same language as in Article 20(3) of our Constitution. The fifth amendment of the United States Constitution provides that – “No person shall be compelled in any Criminal Case, to be a Witness against Himself”.

In fact, there is a federal statute of 1878 which declared that it would be competent for an accused to give evidence on his own behalf but that his failure to do so shall not be subject to any unfavourable inference against him. In a recent interpretation, United States Supreme Court held that any method of interrogation including torture can be used against the suspect, but the fruit of such techniques will not be used against the suspect in a criminal case. The Court has stated that the defendant has an absolute right not to take the stand and that no adverse inference of guilt can be drawn if the defendant exercises his right to silence.

⁶³ *Maghar Singh v. State of Punjab*, 2012(3) RCR (Criminal) 94.

In the *Doe v. United States*,⁶⁴ Hon'ble court held that Confessions, admissions, and other statements taken from a defendant in violation of this right are inadmissible against him during a criminal prosecution. Convictions based on statements taken in violation of the right against self-incrimination normally are overturned on appeal, unless there is enough admissible evidence to support the verdict. The right of self-incrimination may only be asserted by persons and does not protect artificial entities such as corporations this testimonial privilege derives from the Fifth Amendment to the U.S. Constitution. Most state constitutions recognize a similar testimonial privilege.

The Founding Fathers drafted the Fifth Amendment to forestall the use of torture and other means of coercion to secure confessions. The founders believed that coerced confessions not only violate the rights of the individual being interrogated but also render the confession untrustworthy. Once a confession has been coerced, it becomes difficult for a judge or jury to distinguish between those defendants who confess because they are guilty and those who confess because they are too weak to withstand the coercion.

The rationale behind the Fifth Amendment in the U.S. Constitution was eloquently explained in *Waterfront Commission* case,⁶⁵ is extracted herein: "It reflects many of our fundamental values and most noble aspirations: our unwillingness to subject those suspected of crime to the cruel trilemma of self-accusation, perjury or contempt; our preference for an accusatorial rather than an inquisitorial system of criminal justice; our fear that self-incriminating statements will be elicited by inhumane treatment and abuses; our sense of fair play which dictates a fair state-individual balance by requiring the government to leave the individual alone until good cause is shown for disturbing him and by requiring the government in its contests with the individual to shoulder the entire load; our respect for the inviolability of the human personality and of the right of each individual to a private enclave where he may lead a private life; our distrust of self-deprecatory statements; and our realization that the privilege, while sometimes a shelter to the guilty, is often a protection to the innocent."

⁶⁴ *Doe v. United States*, 487 U.S. 201 (1988)

⁶⁵ *Murphy v. Waterfront Commission*, 28 378 US 52 (1964), at p. 55

In *Miranda v. Arizona*,⁶⁶ it was held that the police have to give a warning to the suspect and that the suspect has a right to remain silent. He has a further right to the presence of an attorney during questioning.

At trial, the Fifth Amendment gives a criminal defendant the right not to testify. This means that the prosecutor, the judge, and even the defendant's lawyer cannot force the defendant to take the witness stand at trial, if he or she does not want to do so. Furthermore, when a defendant exercises his or her right not to testify, the jury is not permitted to take that refusal into consideration when deciding whether the defendant is guilty of the crime(s) charged. It is important to note that, once a defendant does take the stand and testify at trial, he or she cannot ordinarily choose to answer some questions but not others. Rather, the defendant's Fifth Amendment privilege is deemed waived through the act of testifying.

In the United States, case law has recognized two constitutional bases for the requirement that only voluntary confessions will be admitted: first, the Fifth Amendment which provides that no person "shall be compelled in any criminal case to be a witness against himself" and the Due Process Clause of the Fourteenth Amendment which states that the voluntariness test is controlled by the Fifth Amendment.

In *United States v. Flanagan*,⁶⁷ it was held that the right against self-incrimination is not absolute. A person may not refuse to file an income tax return on Fifth Amendment grounds or fail to report a hit-and-run accident. The government may compel defendants to provide fingerprints, voice exemplars, and writing samples without violating the right against self-incrimination because such evidence is used for the purposes of identification and is not testimonial in nature. Despite the dubious grounds of distinction between testimonial and non-testimonial evidence, courts have permitted the use of videotaped field sobriety tests over Fifth Amendment objections.

2.6.2. United Kingdom

The privilege against self-incrimination is a long-established common law privilege. The principle derives from common law as a reaction to prisoners being tortured into answering

⁶⁶ *Miranda v. Arizona*, (1966) 384 US 436

⁶⁷ *United States v. Flanagan*, F.3d 949 10th Cir. 1994

self-incriminating questions which would lead to their conviction in the Star Chamber. However, there is no direct reference to the right against self-incrimination, as contained in Article 20(3) of our Constitution or as contained in the Fifth Amendment of the American Constitution

Right against self-incrimination was summarised in 1942 in *Blunt v. Park Lane Hotel Ltd.*,⁶⁸ as the rule "...that no one is bound to answer any question if the answer thereto would, in the opinion of the judge, have a tendency to expose the deponent to any criminal charge, penalty or forfeiture which the judge regards as reasonably likely to be preferred or sued for".

In *Wong Kamming v. R.*,⁶⁹ Lord Hailsham of St. Marylebone held that "... any civilised system of criminal jurisprudence must accord to the judiciary some means of excluding confessions or admissions obtained by improper methods. This is not only because of the potential unreliability of such statements, but also, and perhaps mainly, because in a civilised society it is vital that persons in custody or charged with offences should not be subjected to ill treatment or improper pressure in order to extract confessions. It is therefore of very great importance that the courts should continue to insist that before extra-judicial statements can be admitted in evidence the prosecution must be made to prove beyond reasonable doubt that the statement was not obtained in a manner which should be reprobated and was therefore in the truest sense voluntary."

In *Saunders v. United Kingdom*,⁷⁰ it was explained that "...the right not to incriminate oneself, in particular, presupposes that the prosecution in a criminal case seek to prove their case against the accused without resort to evidence obtained through methods of coercion or oppression in defiance of the will of the accused. In this sense the right is closely linked to the presumption of innocence ... The right not to incriminate oneself is primarily concerned, however, with respecting the will of an accused person to remain silent. As commonly understood in the legal systems of the Contracting Parties to the Convention and elsewhere, it does not extend to the use in criminal proceedings of material which may be obtained from the accused through the use of compulsory powers, but which has an existence independent of

⁶⁸ *Blunt v. Park Lane Hotel Ltd.*, (1942) 2 K.B. 253

⁶⁹ *Wong Kamming v. R.*, [1979] 1 All ER 939, at p. 946

⁷⁰ *Saunders v. United Kingdom*, (1997) 23 EHRR 313

the will of the suspect such as, inter alia, documents acquired pursuant to a warrant, breath, blood and urine samples and bodily tissue for the purpose of DNA testing.”

2.6.3. Australia

Australia has no explicit constitutional protection for the right against self-incrimination, but it is broadly recognized by State and Federal Crimes Acts and Codes and is regarded by the courts as an important common law right. In general, criminal suspects in Australia have the right to refuse to answer questions posed to them by police before trial and to refuse to give evidence at trial. As a general rule judges cannot direct juries to draw adverse inferences from a defendant's silence but there are exceptions to this rule, most notably in cases which rely entirely on circumstantial evidence which it is only possible for the defendant to testify about the right does not apply to corporations.

When position in Australia is analysed, it could be found that there is no Bill of Rights guaranteeing right against self-incrimination and the same is guaranteed by human rights instruments like Human Rights Act, 2004, Charter of Human Rights and Responsibilities Act, 2006.

2.6.4. Canada

The Constitution of Canada contains elaborate provisions regarding legal rights, personal integrity, fair trial and equality. Every person has a right to life and liberty and these rights cannot be curtailed except in accordance with the procedure established by law.⁷¹ The constitution also provides right against self-incrimination under Article 13.

Any witness testifying before the court of law has the right not to give self-incriminatory statements that may be used against him in that any other proceedings. Also, no cruel punishment can be awarded to the accused. Accused cannot be subjected to any cruel or unusual treatment.

Every accused person has a right to fair trial. He has to be tried within reasonable time. Accused is presumed to be innocent until proven guilty by a tribunal which is independent and impartial. Accused cannot be compelled to be a witness against himself. He has to be tried

⁷¹ Article 7, the Constitution of Canada

within a reasonable time period and under Article 9 no one can be unreasonably arrested, detained, or imprisoned.

2.6.5. People's Republic of China

The Constitution of China contains provisions regarding personal freedom and dignity. These provisions are, however, are applicable only on the citizen of China. There is no mention of non-citizens or foreign nationals in provisions above said. The Chinese Constitution provides that personal dignity and freedom cannot be violated except according to the law. A person may be arrested according to the procedure established by law and unlawful arrest or detention is prohibited. Insult, libel, false charge against citizens of China is prohibited. Unlawful search of person of a citizen is also unconstitutional. Under constitution of China, all citizens are equal before law and enjoy fundamental rights guaranteed by the Constitution. Under clause (4) of Article 33 of the Constitution of China, it is specifically provided that China respects and preserves human rights.

2.6.6. Japan

The constitution of Japan recognizes right against self-incrimination and custodial torture, the torture inflicted by any officer is absolutely forbidden.⁷² It also states that no person shall be forced to give any statement that may be exposing him to any punishment. If the only evidence available is the confession of accused, such confession cannot form the basis of conviction. Also, any confession that is made under compulsion, or torture or threat or it is made where detention is prolonged it shall not be an admissible piece of evidence.⁷³

2.6.7. Russia

The constitution of the Russian federation contemplates the freedom and rights of human beings as of supreme value. It considers the utmost duty of the state is to observe and protect the rights and freedoms.⁷⁴

Article 17(3) provides that rights and freedoms enjoyed by a citizen shall not violate the rights and freedoms of other people. Principle of equality is enshrined in Article 19. It states that

⁷² Article 36, the Constitution of Japan

⁷³ Article 38, the Constitution of Japan

⁷⁴ Article 32, the Constitution of Russia

every person is equal before the law. The state shall protect the human dignity of every individual and no individual shall be subjected to torture or violence.

No scientific or medical etc experiments can be carried out without the consent of the subject.⁷⁵

Article 49 provides that every person who is accused of an offence shall be considered innocent until his guilt is proved by following the rules fixed by the federal law and the court pronounce its sentence. Rule against incrimination is contained in Article 51.

2.6.8. South Africa

South African Constitution is based on the value of human dignity. It has clearly mentioned in clause (a) of Article 1 that advancement of human rights and achievement of equality is one of the values on which the constitution is founded. Article 9 provides that everyone is equal before law and is entitled to the equal protection and benefit of law. Also, it has been provided that everyone has the right to life and dignity.⁷⁶

Article 14 provides that privacy is the right of every individual. No individual in person, property, home should be searched without lawful justification. Possessions cannot be seized and privacy of their communication should not be interfered with or infringed. Also, every person has a right not to be detained without trial, and he should not be tortured in any manner.

Article 35 specifically deals with the rights available to the arrested, detained or accused persons. Under this section, the right to remain silent is provided. This article makes it ample clear that when a person is arrested, he is to be informed that he has the right to remain silent and he should also be informed immediately that if he does not exercise his right to remain silent what would be the consequences. Arrested or accused person must not be compelled to confess or admit anything that later on can be used as evidence against him.⁷⁷

Every accused person is also entitled to fair trial which includes right to be presumed innocent, to remain silent, and not to give self-incriminatory statements. Any evidence obtained by contravening the provisions of the constitution is to be excluded if its admission would amount to gross injustice or render the trial unfair.

⁷⁵ Article 21, the Constitution of Russia

⁷⁶ Article 11, Constitution of South Africa

⁷⁷ Article 35(1)(c), Constitution of South Africa

CHAPTER 3

FORENSIC PSYCHOLOGICAL TESTS AND ITS APPLICABILITY IN CRIMINAL JUSTICE SYSTEM

3.1. Development of Forensic Psychological Tests

Emergence of Forensic Psychological Tests was actually proposed against the cruel, inhuman and harsh treatments in evidence collection in criminal justice system which was associated with the demonological thinking that was prevalent prior to 17th century. The development of these tests is intended to make criminal interrogation more scientific and ordained with psychological insight. However, main allegations against these tests are their impact on human rights of the subjects. Some of the crucial forensic psychological tests that have emerged and have found sporadic application in a criminal justice system are polygraph, Neuro-Imaging and Narco-Analysis, which shall be discussed comprehensively hereafter.

3.2. Polygraph

The term ‘Polygraph’ was first coined in the year 1804 by John Isaac Hawkins. Polygraph Test consists of interview or interrogation with psycho physiological measurement. The physiological parameters which are measured are blood pressure, pulse rate, respiration rate and galvanic skin resistance (perspiration rate).

Polygraph Tests are considered to non-invasive in nature. The subject is not coerced to make any statement which has the tendency to incriminate him, and is merely expected to answer in a “yes” or “no”. It must be noted that those “yes” or “no” answers in itself are not taken into consideration in arriving at the results of the test. Only the physiological parameters which are elicited when the “yes” or “no” answers are given are measured.

3.2.1. Theoretical basis of Polygraph

The theory behind Polygraph is that the threat of being discovered in a lie provokes reaction of flight/fight which is an adaptive response to the situations of danger.⁷⁸ This would result in a set of physiological changes which is different from that of a person having no hesitation in purporting the true version of events.

⁷⁸ S.L. Vaya, *Project Report submitted to the Chief Forensic Scientist*, Directorate of Forensic Science, Ministry Home Affairs, New Delhi, National Resource Centre for Forensic Psychology, (2nd ed., 2013), pp.63-64.

The theory behind polygraph tests is that when a subject is lying in response to a question, he/she will produce physiological responses that are different from those that arise in the normal course. During the polygraph examination, several instruments are attached to the subject for measuring and recording the physiological responses. The examiner then reads these results, analyses them and proceeds to gauge the credibility of the subject's answers. Instruments such as cardiographs, pneumographs, cardio-cuffs and sensitive electrodes are used in the course of polygraph examinations. They measure changes in aspects such as respiration, blood pressure, blood flow, pulse and galvanic skin resistance. The truthfulness or falsity on part of the subject is assessed by relying on the records of the physiological responses.

3.2.2. Polygraph Instrument

The Polygraph Test Instrument consists measures physiological parameters such as blood pressure, pulse rate, respiration rate and galvanic skin resistance (perspiration rate). Blood pressure and heart beat rate is measured by an arm encircling cuff placed at the upper arm of the body. The cuff which is filled with air is connected to the Polygraph machine through air tubes. The changes in the blood pressure would modulate the air pressure in the cuff, is recorded by the Polygraph machine and is displayed on the computer screen.

The respiratory pattern is measured by two pneumographs which record thoracic movements or volume change during respiration. One is placed around the chest and the other is placed around the abdomen. Each of them is connected to the machine through air filled rubber tube. As and when the examinee breathes in and out, the air pressure inside the tube changes and is measured by Polygraph machine. The measurement of sweat (Galvanic Skin Resistance) is done by two-piece galvanometer attached to the fingertips of the examinee. Thus, Polygraph measures these physiological measures simultaneously and continuously on the surface of moving graph research work driven by a mechanism known as kymograph.

3.2.3. Procedure of Polygraph Examination

The Polygraph test procedure comprises of the following stages: (i) Pre-test interview, (ii) the Polygraph examination or the Test Interview, (iii) a Post-test interview and, (iv) a re-

examination, if required. The examinees' written consent is also taken before he is subjected to the test.

3.2.3.1. Pre-Test Interview

The Pre-Test Interview is also known as the "Rapport-building" stage. During this phase, the examiner explains the procedure of the test to the examinee and discusses the questions to be asked so that both examiner and the examinee understand the question in the same way. The examiner also analyses the medical history of the examinee. This phase would shape the emotional state of the examinee to face the test. During this phase, the examiner tries to convince the examinee about the accuracy of the test and sometimes demonstration is also made. This phase is not video graphed, and the examinee is hooked to the instruments for recording physiological measures.

3.2.3.2. Test Interview

During this testing phase, any of the questioning techniques are adopted, such as: (i) Relevant-Irrelevant Technique, (ii) Control Question Technique, (iii) Directed Lie Test, (iv) Concealed Information Test (Guilty Knowledge Test) and (v) Peak of Tension Test. The subject has to give "yes" or "no" answers to the questions and the physiological measures corresponding to the answers are measured simultaneously.

In Relevant-Irrelevant Technique, two types of questions are asked. One which is relevant to the crime under investigation and the other is the one which is irrelevant and has nothing to do with the crime under investigation. The rationale behind this test is that if larger response is shown with respect to relevant questions than irrelevant ones, it would indicate that the subject is lying.

In the control question technique, responses of control questions are compared with that of relevant questions. Control questions are of general in nature of the type of the event under investigation and would embarrass both guilty and innocent and their denials would be deceptive. Relevant questions are specific questions about crime. This technique is based on the presumption that, in an innocent person, the response to control question would generate more arousal than relevant question.

In the Directed Lie Test, the issue of standardization in control question is addressed. The examinees will be asked to answer “no” to these questions. The rationale is same as that of control question technique and the criticism other than standardization still remains.

In Guilty Knowledge Test, it is tested whether the examinee possess knowledge about a particular crime which they do not want to reveal. For example, if an examinee had killed a person with a knife and if he shown different weapons including the one, he used for killing, he will surely recognise this knife though he may deny his involvement in crime. It is assumed that this guilty knowledge would result in heightened physiological arousal, which would be detected by Polygraph.

Peak of Tension Test is similar to the format of Concealed Information Test. But it is different from it, in the sense that questions are asked in an easily recognised order. A guilty examinee is expected to show a pattern of responsiveness that increases as the correct alternative in the question sequence approaches and decreases when it passed.

3.2.3.3. Post-Test Phase

In this phase, the examiner analyses the collected physiological data and formulates the opinion about the test results. National Research Centre, in its project report states that responses as indicated in the Polygraph charts are scored in the either of the following manner: (i) NR (No response), or (ii) R (Response), or (iii) D (Doubtful response). NR means no changes are observed in Polygraph tracing while answering a particular question, R means that marked changes are observed in Polygraph tracings while answering that particular question. D means that observable changes occurred in Polygraph tracing while answering that particular question which cannot be ignored. Modern Polygraphs use computer programming in recording the physiological data.

3.2.4. Criticisms of Polygraph Test

The very theoretical basis of Polygraph Test is challenged by many scholars. The theory that, it is the fear of being detected for lying which causes change in the physiological measures in the test, is itself criticised as a flawed one. Physiological changes may also occur due to several other factors like nervousness, anxiety, fear or other emotions or memory hardening. The mere fact that he got himself involved in a criminal case or even the uneasiness caused due to

hooking up with the machine or fatigue or the mental state like depression or hyperactivity of the subject may affect the results of the test.

The accuracy of recordings of physiological measures, fitness condition of the machine and the competency, subjectivity and psychology of the examiner are factors that affect the results of the test. It is also criticised that the time lag between the happening of the event and the conducting of the test also would affect the efficacy of the results as memory of the person fades with the passage of time which may affect the results of the test. False positives and false negatives are raised as other criticisms.

Another important criticism is the use of countermeasures. Apart from that, the test is also criticised as violating human rights like right to personal liberty, privacy, self-incrimination, right against torture etc. It is also criticised that the test violates exclusionary rules of evidence, such as opinion evidence.

Polygraph tests have several limitations and therefore a margin for errors. The premise behind these tests is questionable because the measured changes in physiological responses are not necessarily triggered by lying or deception. Instead, they could be triggered by nervousness, anxiety, fear, confusion or other emotions. Furthermore, the physical conditions in the polygraph examination room can also create distortions in the recorded responses. The test is best administered in comfortable surroundings where there are no potential distractions for the subject and complete privacy is maintained. The mental state of the subject is also vital since a person in a state of depression or hyperactivity is likely to offer highly disparate physiological responses which could mislead the examiner.

In some cases, the subject may have suffered from loss of memory in the intervening time-period between the relevant act and the conduct of the test. When the subject does not remember the facts in question, there will be no self-awareness of truth or deception and hence the recording of the physiological responses will not be helpful. Errors may also result from 'memory-hardening', i.e., a process by which the subject has created and consolidated false memories about a particular incident. This commonly occurs in respect of recollections of traumatic events and the subject may not be aware of the fact that he/she is lying.

The errors associated with polygraph tests are broadly grouped into two categories, i.e., ‘false positives’ and ‘false negatives’. A ‘false positive’ occurs when the results indicate that a person has been deceitful even though he/she answered truthfully. Conversely a ‘false negative’ occurs when a set of deceptive responses is reported as truthful. On account of such inherent complexities, the qualifications and competence of the polygraph examiner are of the utmost importance. The examiner needs to be thorough in preparing the questionnaire and must also have the expertise to account for extraneous conditions that could lead to erroneous inferences.

However, the biggest concern about polygraph tests is that an examiner may not be able to recognise deliberate attempts on part of the subject to manipulate the test results. Such ‘countermeasures’ are techniques which are deliberately used by the subject to create certain physiological responses in order to deceive the examiner. The intention is that by deliberately enhancing one’s reaction to the control questions, the examiner will incorrectly score the test in favour of truthfulness rather than deception. The most commonly used ‘countermeasures’ are those of creating a false sense of mental anxiety and stress at the time of the interview, so that the responses triggered by lying cannot be readily distinguished.

Since polygraph tests have come to be widely relied upon for employee screening in the U.S.A., the U.S. Department of Energy had requested the National Research Council of the National Academies (NRC) to review their use for different purposes. The following conclusion was stated in its report, i.e. *The Polygraph and Lie-Detection: Committee to Review the scientific evidence on the Polygraph* (Washington D.C.: National Academies Press, 2003) at pp. 212-213:

“Polygraph Accuracy: Almost a century of research in scientific psychology and physiology provides little basis for the expectation that a polygraph test could have extremely high accuracy. The physiological responses measured by the polygraph are not uniquely related to deception. That is, the responses measured by the polygraph do not all reflect a single underlying process: a variety of psychological and physiological processes, including some that can be consciously controlled, can affect polygraph measures and test results. Moreover, most polygraph testing procedures allow for uncontrolled variation in test administration (e.g.,

creation of the emotional climate, selecting questions) that can be expected to result in variations in accuracy and that limit the level of accuracy that can be consistently achieved.

Theoretical Basis: The theoretical rationale for the polygraph is quite weak, especially in terms of differential fear, arousal, or other emotional states that are triggered in response to relevant or comparison questions. We have not found any serious effort at construct validation of polygraph testing.

Research Progress: Research on the polygraph has not progressed over time in the manner of a typical scientific field. It has not accumulated knowledge or strengthened its scientific underpinnings in any significant manner.

Polygraph research has proceeded in relative isolation from related fields of basic science and has benefited little from conceptual, theoretical, and technological advances in those fields that are relevant to the psychophysiological detection of deception.

Future Potential: The inherent ambiguity of the physiological measures used in the polygraph suggests that further investments in improving polygraph technique and interpretation will bring only modest improvements in accuracy.”

A Working Party of the British Psychological Society (BPS) also came to a similar conclusion in a study published in 2004.⁷⁹

3.3. Neuro Imaging Tests

Brain Imaging tests which are used in Criminal justice system are either Functional Magnetic Resonance Imaging (fMRI) based test and Electro Encephalograph based test (EEG). EEG based test is used in Brain Fingerprinting in US and Brain Electrical Oscillation Signature Profiling test in India.

3.3.1. Functional Magnetic Resonance Imaging

⁷⁹ A Review of the current scientific status and fields of application of polygraph deception detection - Final Report (6 October, 2004) from The British Psychological Society (BPS) Working Party at p. 10

Functional Magnetic Resonance Imaging (fMRI) is used in criminal investigation in two ways. One is similar to the manner in which ordinary Polygraph may be used. Secondly, it could be used to read information from the brain. When we consider the first way in which fMRI is used, the test work on the assumption that different areas of the brain will be active when deliberate deception is made compared to when a person tells a truth.⁸⁰ Though it may be stated that the exact regions which were activated during lying varied from study to study, the common theory is that when a person tells a lie it requires greater input from the executive regions of the brain.⁸¹

Functional Magnetic Resonance Imaging (fMRI) is another neuroscientific technique whose application in the forensic setting has been contentious. It involves the use of MRI scans for measuring blood flow between different parts of the brain which bears a correlation to the subject's truthfulness or deception. fMRI-based lie-detection has also been advocated as an aid to interrogations in the context of counter-terrorism and intelligence operations, but it prompts the same legal questions that can be raised with respect to all of the techniques. Even though these are non-invasive techniques the concern is not so much with the manner in which they are conducted but the consequences for the individuals who undergo the same. The use of techniques such as 'Brain Fingerprinting' and 'fMRI-based Lie-Detection' raise numerous concerns such as those of protecting mental privacy and the harms that may arise from inferences made about the subject's truthfulness or familiarity with the facts of a crime.

3.3.1.1. Brain Fingerprinting Tests

Brain Fingerprinting Test depends on electrical activity in the brain. It detects concealed information stored in the brain by measuring brainwaves. Brain fingerprinting is an objective, scientific method to detect concealed information stored in the brain by measuring electroencephalographic (EEG) brain responses, or brainwaves, non-invasively by sensors placed on the scalp. The technique involves presenting words, phrases, or pictures containing salient details about a crime or investigated situation on a computer screen, in a series with other, irrelevant stimuli. Brain responses to the stimuli are measured. When the brain processes information in specific ways, characteristic brainwave patterns can be detected through

⁸⁰ Kevin Thompson, "The Legality of the Use of Psychiatric Neuro Imaging in Intelligence Interrogation," Vol.90, Cornell Law Review, 2005, pp.1601- 1637 at p. 1602.

⁸¹ Michael S. Pardo, "Neuroscience Evidence, Legal Culture, and Criminal Procedure," Vol. 33, American Journal of Criminal Law, 2006, pp. 301-337 at pp.307-310.

computer analysis of the brain responses. In this test, the suspect has to wear a special head band containing electrodes and sensors. Then he would be seated in front of a computer screen and he watches a visual presentation of the stimuli. He had to respond by clicking to one of the mouse buttons when words, signs etc. flashes before him. In this test, the subject is not required to give any verbal answers. The familiarity is investigated using three types of stimuli viz., (i) probes, (ii) irrelevant and (iii) targets.

The 'probes' are that information which are relevant to the crime and would be known only to the suspect who was actually involved in it. This information is not available from any other source. 'Irrelevant' are those which are not relevant to any one regardless, whether innocent or guilty. The brain wave response with respect to target would form the base line measurement against which other responses are compared. 'Targets' are crime related information which are arbitrarily selected and is made known to all the suspects.

The test predicts that the target would elicit a phenomenon called MERMER (Memory and Encoding Related Multifaceted Electroencephalographic Response) in all suspects as it was intentionally made known to all of them. The probes would elicit MERMER wave only in those suspects who are actually involved in the crime. Irrelevant would not elicit response in any person. When the suspects MERMER wave response for probes mimics their MERMER wave response for targets, an information present determination is made. This means that the subject knows and recognises all the crime relevant probes showing his awareness of the crime relevant information.

When the neural response to probes is indistinguishable from that of irrelevant; information absent determination is made. This means that the subject does not have any information about the crime. In some cases, the result may also be "indeterminate" when statistical value has fallen below the threshold level. This means that data is insufficient to make a decision. Thus, by comparing the responses to different stimuli, the test mathematically computes whether "information present" or "information absent". The results are determined mathematically and do not involve the subjective judgment of the examiner.

3.3.1.2. Brain Electrical Oscillation Signature Profiling Test

Brain Electrical Oscillation Signature Profiling test (BEOS) is developed in India. Presently Forensic Science Laboratories at Gandhi Nagar (Gujarat), Bangalore (Karnataka) and Mumbai have BEOS Test.

In forensic setup, this technique is used to identify the presence of experiential knowledge in the person who has committed the crime. Experiential knowledge is facilitated by awareness of contextual details and emotional arousal if present. The theoretical basis is that, knowing and remembering are two neuro-cognitive processes. Knowing refers to the cognitive process of recognition with or without familiarity. Remembrance is the neurocognitive process of bringing personal past to the present. Remembrance, thus, involves personal experience of an individual, gained by personal participation. BEOS Profiling Test does not actually measure conceptual knowledge. But it measures, the remembrance of experiential knowledge. The electrical activity related to remembrance is called the signature of the experience. The process actually involves a retrieval of the experiential knowledge. The signature will be present only if a remembrance can be evoked by the specially designed probes. Absence of experiential knowledge results in absence of the signature.

During a BEOS test, the subject is hooked up in a quantitative electro encephalogram fitted with a cap of 32 sensors. He needs simply sit with his eyes closed and listen to a series of a statement. The subject is not required to make any verbal responses. The statements read out to the individual are referred to as probes. The probes which are presented as statements are expected to function as a trigger for provoking the remembrance and associated awareness as to experience. Probes fall into three categories: (i) Neutral, (ii) Control and (iii) Relevant (Target).

“Neutral probes” establish the base line and it may or may not evoke experiential knowledge; “Control probes” are related to personal information and are supposed to evoke experiential knowledge whereas, “Relevant”, relates to the case under investigation. The computer based BEOS system compares the electrical activity in response to the relevant probes against the individual base line. It is claimed that BEOS system is able to detect and differentiate between electrical output of the brain that represents conceptual knowledge and experimental knowledge. In the report, experiential knowledge, which is the memory of performing the action, is reported.

3.3.2. Criticisms of Neuro-Imaging

The criticisms of Neuro Imaging Tests are that the tests violate human rights and also that they are not reliable.

As regards Brain Fingerprinting, the foremost criticism is that it is based on uncertain premise and violates mental privacy of the subject. Moreover, it is difficult to distinguish between actual perpetrator and witness. If the person who is subjected to this test already had exposure to the material probes either through media reports or through investigating officers etc., there is no utility in conducting the test. Another criticism is that in the case of subjects suffering from amnesia or memory hardening, the test results would be misleading.

This test is also criticised as dependent upon examiner bias and skill, as the examiner has to determine the subject's base line MERMER through a series of preliminary questions. If this is not done carefully, the subject could be unconsciously exposed to sensitive information which could later generate a MERMER when guilt implicating stimuli are presented. Finally lack of validation of the test is also considered as another issue which affects the admissibility of the test results during trial.

With respect to BEOS Test, most of the issues like uncertain premise, issue as to mental privacy, self-incrimination, Inherent difficulty in designing appropriate probes, difficulty in case of subjects suffering from amnesia or memory hardening, misleading test results etc., are same as that of Brain Finger Printing. Reliability of the test is also challenged and it is also criticized that this test fails to meet Daubert criteria as to admissibility standards.

Another significant limitation is that even if the tests demonstrate familiarity with the material probes, there is no conclusive guidance about the actual nature of the subject's involvement in the crime being investigated. For instance, a by-stander who witnessed a murder or robbery could potentially be implicated as an accused if the test reveals that the said person was familiar with the information related to the same. Furthermore, in cases of amnesia or 'memory-hardening' on part of the subject, the tests could be blatantly misleading. Even if the inferences drawn from the 'P300 wave test' are used for corroborating other evidence, they

could have a material bearing on a finding of guilt or innocence despite being based on an uncertain premise.

However, on analysis of the nature and working of FMRI, Brain Fingerprinting and BEOS Tests reveal that the tests are generally non-invasive. As far as FMRI is concerned, there is head restraint and the test works like ordinary Polygraph. When Brain Fingerprinting and BEOS Tests are considered, the nature of the tests is the same. In Brain Finger Printing, the subject has to respond by clicking the mouse, though it is irrelevant in the determination of test results. In BEOS, the subject need not make any response. Thus, the nature of the tests varies, though they belong to the same category.

3.4. Narco Analysis

The term 'Narco Analysis' was coined by Horseley and was derived from a Greek word "narkc" which means numbness, anaesthesia or torpor. Narco-analysis for the first times gained the popularity in the year 1922, when Robert House, who was an obstetrician in Texas used the drug scopolamine on two prisoners. Under the test both denied the crimes for which they had been detained and upon trial they were found innocent. Subsequent to the successful experimentation it was concluded by House that subject cannot lie in sleep like state under the effect of Scopolamine. It is only after this experiment that the phrase 'truth serum' came into limelight.

Narcoanalysis is a test carried out on a patient or suspect when he/she, after administering barbiturates, comes in a sleep like state, and his/her repressed feelings are released. It is also called narcosynthesis. As the Webster's Dictionary states the term was coined is 20th century and is a combination of two words 'Narco' and 'Analysis'. It means psychoanalysis in a state which is similar to sleep and this state is achieved by use of drugs. These drugs are nicknamed 'truth drugs' or 'truth serum'.

Narco Analysis technique uses psychotropic drugs particularly barbiturates which induces a "trance like state" in which mental elements with strong associated effects come into the surface which can be exploited by the therapist.

Narcoanalysis test involves the intravenous administration of a drug that causes the subject to enter into a hypnotic trance and become less inhibited. The drug-induced hypnotic stage is useful for investigators since it makes the subject more likely to divulge information. The drug used for this test is sodium pentothal, higher quantities of which are routinely used for inducing general anaesthesia in surgical procedures. This drug is also used in the field of psychiatry since the revelations can enable the diagnosis of mental disorders. However, we have to decide on the permissibility of resorting to this technique during a criminal investigation, despite its' established uses in the medical field. The use of 'truth-serums' and hypnosis is not a recent development. Earlier versions of the narcoanalysis technique utilised substances such as scopolamine and sodium amytal.

3.4.1. Modus of conducting Narco Analysis Test

In a Narco Analysis test, the subject is administered with sodium pentothal, sodium thiopental and barbiturate or even a mixture of these drugs. The test is conducted by mixing 3 grams of above chemicals dissolved in 3000 ml of distilled water. The expert then injects the subject with this solution under the controlled circumstances in a laboratory or in an operation theatre of a hospital. The dosage depends on the subject's age, sex, health and physical condition. The questions are asked in the stage of hypnosis. In that stage, the subject cannot speak on his own initiative, but could answer only specific but simple questions on giving some suggestions.

When a person tells lies, his brain filters his thoughts and decides as to what is to be revealed or concealed. Lying is mediated through GABA (Gamma Amino Butric Acid). The sodium pentothal administered before the test will have inhibitory effect on GABA. This means that, the drug will work in such a way as to inhibit the thought filtration process of the brain so that the person will be unable to manipulate the answers. He will be answering spontaneously and will not be able to lie.

In *Selvi v. State of Karnataka*,⁸² it was observed that in a Narco Analysis test, the subject ordinarily descends into anaesthesia in four stages. They are (1) Awake stage, (2) Hypnotic stage, (3) Sedative stage and (4) Anaesthetic stage. The person becomes more lucid usually at the second stage of anaesthesia, in which he would be in the stage of excitement. In this stage since GABA is inhibited by the drug, the subject's capacity to lie is reduced or removed

⁸² *Selvi v. State of Karnataka*, (2010) 7 SCC 263, 298.

temporarily. This stage is utilised by a well-trained psychologist with carefully formulated questions so as to get the probative truth about the crime from the subject. This stage is maintained for the required period by controlling the rate of administration of the drug with the help of anaesthetist.

The Narco Analysis Test is conducted usually by a team consisting of one anaesthetist, one physician and one clinical or forensic psychologist, a videographer and a language interpreter if needed. In India, these tests are conducted either in Forensic Science Laboratories with Operation Theatre facilities or in the operation theatres of recognised hospitals. The whole procedure is audio and video recorded. The test is conducted based on court order and the consent of the subject is also taken.

3.4.2. Criticisms

Narco Analysis is criticised as unreliable and not scientifically valid. The substances used in the test like sodium pentothal, sodium amytal, scopolamine etc., do not assure the truthfulness of the information. What they actually do is to lower the inhibition and increase loquacity.

There is always possibility that the subject will not reveal any relevant information. The revelations are sometimes hallucinations, dreams or personal information unconnected with the case. The studies have also revealed that some persons are also able to retain their ability to deceive even in hypnotic stage. Hence it would require great skill on the part of the interrogator to extract and identify information which would eventually prove to be useful.

Inherent invasiveness of the test itself is raised as the main criticism. The impact of the drug on each individual's health varies. The quantum of drug to be injected depends on the age, sex, health etc. of the concerned persons. Excess quantity of the drug would put the subject to coma, or it may even result in his death.

It is also important to be aware of the limitations of the 'narcoanalysis' technique. It does not have an absolute success rate and there is always the possibility that the subject will not reveal any relevant information. Some studies have shown that most of the drug-induced revelations are not related to the relevant facts and they are more likely to be in the nature of inconsequential information about the subjects' personal lives. It takes great skill on part of

the interrogators to extract and identify information which could eventually prove to be useful. While some persons are able to retain their ability to deceive even in the hypnotic state, others can become extremely suggestible to questioning. This is especially worrying, since investigators who are under pressure to deliver results could frame questions in a manner that prompts incriminatory responses. Subjects could also concoct fanciful stories in the course of the 'hypnotic stage'. Since the responses of different individuals are bound to vary, there is no uniform criteria for evaluating the efficacy of the 'narcoanalysis' technique.

Thus, Forensic Psychological Tests may be divided into two categories based on degree of invasiveness to the body of the person subjected to the tests. Invasive test may be defined as the one in which the examiner uses instrumentation which physically enters into the body as in the case of taking blood sample. Non-invasive procedures are those which do not involve instrumentation that physically enters into the body like pressure cuff, electroencephalogram, etc. Thus, all tests other than Narco Analysis Test may be referred as non-invasive tests and Narco Analysis Test may be referred as invasive test.

CHAPTER 4
RELEVANCY AND ADMISSIBILITY OF FORENSIC PSYCHOLOGICAL TESTS
IN INDIA AND OTHER LEGAL SYSTEMS

4.1. Introduction

Almost every country of the world has the provisions of scientific developments for the benefit and welfare of their citizens and nations. There are provisions contained in the constitutions across the world that talk about scientific research and developments.

The principle of criminal justice system is to protect the innocent from wrongly conviction and punishment of culprit. All this is possible only if the truth is searched by the investigating authorities. There is no doubt that constitutions of various countries speak about scientific advancements but when it comes to applying scientific techniques in interrogation, across the globe, every nation hesitates. Worldwide, rights of accused persons are advocated. Doubts are raised regarding the capability and reliability of scientific techniques of investigation. In all the criminal trials it is the duty of the prosecution to prove the guilt of accused beyond reasonable doubt. The major problem is adverse inferences cannot be carved out against the accused if he refuses to answer the questions put to him by the prosecution. Accused is not bound to answer self-incriminatory questions. The right to silence is available to him which is an extension of “*nemo debet prodere ipsum*” i.e., right against self-incrimination.

The right to silence has various facets. First, the prosecution is to bear the burden to prove the guilt of accused person. Secondly, till then accused is to be presumed innocent. Thirdly, accused cannot be compelled to answer the questions that have the potential of exposing him. This means the whole burden of criminal trial, of proving accused guilty is on prosecution which in turn includes dissemination of justice to the victim and the society at large.

With the development of science and technology, criminal of today is smart enough to leave any evidence behind. However, courts in today’s changed scenario are relying on age old techniques of investigation and interrogation. The Biggest irony today in use of investigative techniques is that photographs of accused, blood samples, finger-prints, voice samples, hair, D.N.A etc., can be taken and analysed without the accused’s consent but in conducting Narco-

analysis, Brain-mapping Polygraph tests, Courts express opinion in negative, or with self-defeating formalities.

In *D. K. Basu v. State of West Bengal*,⁸³ the Hon'ble Supreme Court expressed that there is a need to develop scientific techniques and methods for investigation and interrogation of accused as custodial deaths and torture is nothing else but a blow at rule of law.

Nacro-analysis, Brain-mapping and polygraph test is nothing but an efficient and scientific method of investigation. In India, where right to life is a fundamental right, a sad picture of custodial crimes is also present. Custodial rapes, deaths, torture all violate right to life which includes right to live with human dignity.⁸⁴ There are thousands of cases of custodial torture, where accused implicated large number of injuries for the purpose of extorting information regarding theft and eventually accused die.⁸⁵ Newspapers are full of such unfortunate incidents. Custodial crime is violation of fundamental rights subjecting an accused to undergo a scientific test is much better option than to letting him face third degree torture. These tests are viewed as violative of Articles 20(3) and Article 21, rather they should be taken as supportive of fundamental rights. Right to speedy and fair trial is also a fundamental right available to both accused and victim. In fact, if trial is not quick it cannot be regarded as reasonable, just or fair and it would fall foul of article 21 and these scientific techniques help in speedy and fair trial. The concept of fair trial and fair investigation is not only to be considered from the point of view of liberty or right of accused only, the victim and the society also suffers where investigation becomes a casualty.⁸⁶

In the light of above provisions, the question is it fair to give protection to the accused at the cost of social security? The position as to use of scientific techniques in investigation is almost similar across the nations. The present chapter is an attempt to analyse different laws regarding Narco-analysis, Brain mapping and Polygraph prevailing in various countries their admissibility and enacted provisions if any along with the Constitutional rights available to accused in several countries.

⁸³ *D. K. Basu v. State of West Bengal*, AIR 1997 SC 610

⁸⁴ *Haricharan v. State of M.P.*, 2011(2) RCR (Criminal) 330 (SC)

⁸⁵ *V. Shekhar v. State of Karnataka*, 1991 Cri and J. 1100

⁸⁶ *Gurbaksh Singh v. State of Punjab*, 2013(1) Law Herald 652

4.2. Relevancy and Admissibility of Forensic Psychological Tests in India

The beginning of the development of Forensic Psychological Tests in India was made in 1968 with the establishment of Lie Detection Division in Central Forensic Science Laboratory, Central Bureau of Investigation, Delhi, by appointing a psychologist.⁸⁷

The second step in development of Forensic Psychological Tests in India began with the establishment of Forensic Psychology Division in Forensic Science Laboratory, Gujarat in 1988 by renaming Lie detection Division in the Laboratory in Gujarat. Necessary amendments were made in Gujarat Police Manual, 1975 for conducting the tests.

Admissibility of scientific evidence involves some important questions relating to basic rights that are available to accused under various provisions of law in India. Major problem in India is that we always look at a provision of law through the view-point of accused and we totally forget the pain, misery and trauma of a victim and victim's family.

Admissibility of scientific evidence has attracted a serious debate in India especially post *Selvi v. State of Karnataka*,⁸⁸ wherein hon'ble Supreme Court has held that Narco-analysis, Brain-mapping and polygraph tests cannot be conducted without the consent of accused person.

The presumption of innocence of the accused in English criminal jurisprudence has basically been the mainstay of this rule in India. The rule casts burden on the prosecution to prove a person guilty and allows the accused to stand by and watch prosecution failing in establishing the charge conclusively and beyond all reasonable doubts. This presumption of innocence gave birth to the rule of immunity from self-incrimination embodied in Article 20(3) of our Constitution. The rule in our Constitution is, however, narrower than the one obtaining in the U.S.A. and the U.K.

It must be noted at the onset that before 1978, the President had powers under Article 359 of the Constitution to suspend the enforcement of any fundamental right guaranteed in Part III of

⁸⁷ Dr. S.L. Vaya, "Forensic Psychology in India," Vol.1 (1), International Journal on Police Science, July 2015, pp.29-34 at p.29.

⁸⁸ *Smt. Selvi v. State of Karnataka*, AIR 2010 SC 1974

the Constitution of India. Article 359 was amended in 1978,⁸⁹ and after this amendment the rights guaranteed under Article 20 and 21 cannot be suspended by President.

It goes without saying that the administration of justice and the need to control crime effectively requires the strengthening of the investigative machinery. The Courts have time and again emphasized that it is as much necessary to protect an accused person against being compelled to incriminate himself, as to arm the agents of law and the Courts of law with legitimate powers of bringing offenders to justice. As a result, several types of evidences are excluded from the purview of Article 20(3) with a view to draw a balance between the exigencies of investigation of crimes and the need to safeguard the individual from being subjected to third degree methods. Newer methods of eliciting truth and objective information, based on scientific analysis instead of coercive methods, have emerged which has the potential to change the dynamics of the traditional understanding of privilege against self-incrimination. Moreover, Article 20(3) is not applicable in cases where any sort of recovery is made, be that an object or evidence, from the possession of a person.⁹⁰

In *People's Union for Civil Liberties v. Union of India*,⁹¹ the Hon'ble Supreme Court held that a person becomes witness only when he makes oral or written statements in or out of court relating to any person who is accused of an offence. The giving of any sort of identification as for instance impression of thumb or foot or palm or fingers or giving of specimen of handwriting is not at all covered under Article 20(3). For testimonial compulsion it is essential that a person forwards his personal knowledge about happening or non-happening of an event. The perfunctory practice of producing documents which may throw light on any of the controversial points does not amount to self-incrimination.⁹²

In *State of U.P. v. Boota Singh*,⁹³ the Apex Court held that if directions are issued to the accused to give his specimen signatures and handwriting that does not amount to testimonial compulsion similar is the case with scientific evidence because accused is just directed to undergo a test not to give a specific statement. It can be termed as a search of the person being conducted by experts and in India search and seizures are not held violative of Article 20(3)

⁸⁹ The Constitution (44th Amendment) Act, 1978

⁹⁰ *M.P. Sharma v. Satish Chandra*, AIR 1954 SC 300

⁹¹ *People's Union for Civil Liberties v. Union of India*, AIR 2004 SC 456

⁹² *State of Bombay v. Kathi Kalu Oghad*, AIR 1961 SC 1808

⁹³ *State of U.P. v. Boota Singh*, AIR 1978 SC 1770

because it is not an act of the accused but a third person is doing that act i.e., the police officer or an expert. An accused is obliged to submit to the concerned authority be those police or investigating authority, and therefore, submission of accused to the authorities cannot in any case amount to his testimonial act.⁹⁴

General statements given by any person at some regular inquiry or investigation without formal charges being framed against accused would not attract Article 20(3) even if that statement turns out to be incriminatory at some later stage.⁹⁵

In *Dinesh Dalmia v. State of Maharashtra*,⁹⁶ it was ruled that “Narco-analysis testimony was not by compulsion because the accused may be taken to the laboratory for such tests against his will, but the revelation during such tests is quite voluntary”. The Bombay High Court, in *Ramchandra Reddy*,⁹⁷ upheld the legality of the use of P300 or Brain finger-printing, lie-detector test and the use of truth serum or Narco analysis.

Furthermore, Medical Examination of the accused is not barred under Article 20(3),⁹⁸ even drawing of blood samples, pubic hair etc. in the offence of rape, where prosecution has to establish the guilt of accused beyond reasonable doubt is not held to be violative of Article 20(3),⁹⁹ because right to fair investigation is a fundamental right,¹⁰⁰ that no victim should be derived to especially in a criminal case. It is humbly submitted that scientific evidence in such a scenario would provide a great help to investigation authorities in exhuming the truth from accused and establishing the guilt beyond reasonable doubt.

In *Ritesh Sinha v. State of Uttar Pradesh*,¹⁰¹ the Supreme Court held that the Judicial Magistrate can direct an accused to provide his voice samples for investigation even without his consent.

⁹⁴ *State of Gujarat v. Shamlal*, AIR 1965 SC 1251

⁹⁵ *Veera v. State of Maharashtra*, AIR 1976 SC 1167

⁹⁶ *Dinesh Dalmia v. State of Maharashtra*, Cr. L.J. (2006) 2401

⁹⁷ *Ramchandra Reddy and Ors. v. State of Maharashtra*, Cr. W.P (c) No. 1924 of 2003

⁹⁸ *State v. Navjot Sandhu*, (2005) 11 SCC 600.

⁹⁹ *Halappa v. State of Karnataka*, 2011(7) RCR (Criminal) 29 Karnataka

¹⁰⁰ *Virbhadra Singh v. State of H.P.*, 2011(1) RCR (Criminal) 396 (Ho.)

¹⁰¹ *Ritesh Sinha v. State of Uttar Pradesh*, AIR 2019 SC 3592

In *Harjinder Kaur v. State of Punjab*,¹⁰² the Punjab and Haryana High Court held that subjecting an accused to DNA test does not violate Article 20(3). It is out of question that any infringement of right against testimonial compulsion occurs if the court requires a person male or female to submit to DNA, the courts can do so validly. The question arises that when courts can compel an accused for DNA tests; to give specimen signatures, hand, palm, foot impressions, there should be no hesitation in subjecting accused to Narco-analysis, polygraph and brain mapping tests as these techniques would help in efficient investigations and inquiries by authorities.

In *Usufalli v. State of Maharashtra*,¹⁰³ it was held by Supreme Court, that tape-recording of statements of accused is not violation of Article 20(3) even if the recording is done without consent and knowledge of accused. This recording may be used against accused but it would not attract Article 20(3) reason being there is no presence of compulsion here.

Thus, the existing legal position underlying Article 20(3) of the Constitution of India is that if an accused is compelled to undergo a test, it would not come under the ambit of self-incrimination. However, in *Smt. Selvi v. State of Karnataka*,¹⁰⁴ hon'ble Supreme Court has held that Narco-analysis, Brain-mapping and polygraph tests cannot be conducted without the consent of accused person.

4.2.1. Role of National Human Rights Commission

National Human Rights Commission has always worked for the protection of the basic human rights available to every human being. Certain guidelines have been given by the National Human Rights Commission as regards the admissibility of Forensic Psychological tests and psychiatric evaluation in India, as purported under:

- (1) "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.
- (2) 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.

¹⁰² *Harjinder Kaur v. State of Punjab*, 2013(2) RCR (Criminal) 146 (P and H)

¹⁰³ *Usufalli v. State of Maharashtra*, AIR 1968 SC 147

¹⁰⁴ *Smt. Selvi v. State of Karnataka*, AIR 2010 SC 1974

- (3) The consent should be recorded before a Judicial Magistrate.
- (4) During the hearing before the Magistrate, the person alleged to have agreed should be duly represented by a lawyer.
- (5) 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.
- (6) The Magistrate shall consider all factors relating to the detention including the length of detention and the nature of the interrogation.
- (7) The actual recording of the lie detector test shall be done in an independent agency (such as a hospital) and conducted in the presence of a lawyer.
- (8) A full medical and factual narration of manner of the information received must be taken on record.”

At present in India only the above stated guidelines are available that regulate the use of these techniques. Even these guidelines were referred by the Apex Court in *Selvi v. State of Karnataka*, wherein the court ordered that these guidelines should be followed while conducting narco-analysis, polygraph and brain mapping.

4.2.2. Procedural safeguards taken while conducting the tests

At present, there exists no comprehensive legislation governing these tests. The tests are mainly governed by the guidelines laid down by the Supreme Court in the *Selvi* decision,¹⁰⁵ National Human Rights Commission Guidelines, and also as per the Laboratory Procedure Manuals.

Apart from these, the provisions of the Constitution of India, The Code of Criminal Procedure, The Indian Evidence Act and the Identification of Prisoners Act also govern the administration of the tests. In the *Selvi* decision, the guidelines relating to the procedural safeguards as regards forensic psychological tests are purported under:

- (1) No lie detector test should be administered except on the basis of consent of the accused. An option should be given to the accused as to whether he wishes to avail the test.

¹⁰⁵ *Smt. Selvi v. State of Karnataka*, AIR 2010 SC 1974

- (2) If the accused volunteers a lie detector test, he should be given access to lawyer. The physical, emotional and legal implication of the test should be explained to him by the police and his lawyer.
- (3) The consent should be recorded before the judicial magistrate.
- (4) During the hearing before the magistrate, the person alleged to have agreed for the test should be duly represented by a lawyer.
- (5) At the hearing the person in question should be told in clear terms that the statement that is made shall not be confessional statement to the magistrate but will only have a status of a statement made to the police.
- (6) The magistrate shall consider all factors relating to the detention including the length of detention and the nature of interrogation.
- (7) The actual recording of the lie detector test shall be done by an independent agency (such as a hospital) and shall be conducted in the presence of a lawyer.
- (8) A full medical and factual narration received must be taken on record.

NHRC Guidelines on Administration of Polygraph/Lie Detector Test, 2000 were issued by NHRC. Selvi guidelines are actually NHRC guidelines. NHRC guidelines were confined to Polygraph Test. The Supreme court extended these guidelines to Narco Analysis and BEOS Test also.

4.3 Relevancy and Admissibility of Forensic Psychological Tests in other Legal Systems

4.3.1. United States of America

5th Amendment to the constitution of United States is against self-incrimination. In a recent interpretation, United States Supreme Court held that any method of interrogation including torture can be used against the suspect, but the fruit of such techniques will not be used against the suspect in a criminal case.

There is an Act in the United States of America, namely, Employees Polygraph Protection Act, 1988, which United States passed on December 27, 1988, which regulates the use of Polygraph test. It was common practice in America that employers used to subject the employees to Polygraph test prior to employment. The employees Polygraph Protection Act was passed so as to prohibit employers and to provide employees an opportunity to get employment without undergoing Polygraph test. There are certain exceptions also. This act

does not prohibit state authorities or the government from using Polygraph. This made use of Polygraph test in U.S.A quite ambiguous and confusing. The standard of using Polygraph test in United States can be categorized into three compartments based upon the response to its admissibility as follows:

1. A shrinking majority of state courts and a minority of federal court absolutely prohibit the results of a lie detector test as evidence in the court.
2. A growing number of states admit the polygraph tests in the court provided both the parties agree in writing for conducting the test.
3. A majority of federal and several state courts have left the issue to be decided by the judges whether they want to introduce polygraph test.¹⁰⁶

The admissibility of scientific evidence was raised in the year 1923 in *Frye v. United States*, wherein accused wanted to produce an expert witness to testify the result of the systolic blood pressure deception test. The court rejected the plea and held that systolic blood pressure technique has not yet gained sufficient recognition among physiological and psychological experts which may give justification to the court to admit expert testimony.

Till 1993, scientific evidence was admissible only if it has satisfied the standard of general acceptance in the particular field. However, the principle laid down in *Frye's* case was modified in *Daubert v. Merrel Dow Pharmaceuticals Inc.*¹⁰⁷ In this case the court held that scientific evidence is admissible in the court of law if the principle is scientifically valid and evidence reliable. In this case recognition was given to Rule 702 of Federal Rules of Evidence formulated in the year 1975 which talks about admissibility of new scientific knowledge.

Narco-analysis was not really popular in America as an investigation tool. The federal bureau of investigation used to prefer other psychological methods in place of narco-analysis as it considered this technique as abusive and torturous. However, Narco-analysis was conducted on suspects post terrorist attack on world trade centre rampantly.¹⁰⁸

¹⁰⁶ Ekta Gupta, "Lie Detector Tests: A Global Perspective", *Criminal Law Journal*, August 2006, p 181.

¹⁰⁷ *Daubert v. Merrel Dow Pharmaceuticals Inc.*, 509 US 579 (1993)

¹⁰⁸ J. Lee Adamich, "The Selected Cases of Myron the Bright: 30 years of His Jurisprudence, 83 *Minn. L. Rev.* 239.

The 5th Amendment to the Constitution of United States is against self-incrimination. In a recent interpretation, United States Supreme Court held that any method of interrogation including torture can be used against the suspect, but the fruit of such techniques will not be used against the suspect in a criminal case.

In *United States v. Solomon*,¹⁰⁹ the Ninth Circuit Court held Narco analysis inadmissible and held that narco-analysis does not produce reasonably reliable statements. It is also considered in America that statements made under narco-analysis is not a product of a rational intellect and a free will, so they are inadmissible. In *Lindsey v. United States*,¹¹⁰ the Ninth Circuit Court has excluded a recording of an interview which was taken with help of sodium pentothal. In this case a psychiatric was willing to give evidence but his testimony was rejected by the court.

Brain mapping according to the Federal Bureau of Investigation is the most significant technique since advent of D.N.A.¹¹¹ The IOWA Supreme Court ruled in the year 2001 that brain mapping is admissible in the court.¹¹² In this case accused's plea of alibi was rejected and he was held liable for the murder of the watchman in 1978. In the year 2000, Dr. Farwell conducted brain mapping and found that accused is innocent. A retrial was ordered, however, on other grounds and accused was set free eventually, namely narco-analysis, polygraph and brain mapping area governed by the principle laid down in *Daubert v. Merrel Dow Pharmaceuticals Inc.*, that scientific evidence is admissible if it is reliable and scientifically valid.

Rules 702 to 706 of Federal Rules of Evidence exclusively deal with the expert evidence. Rule 702 specifically deals with the admissibility of scientific evidence. It states that if scientific technical or other specialized knowledge assists the tries of facts to understand the evidence or to determine the facts in issue, it may be testified in the form of an opinion or otherwise. Under Rule 402 all evidence area admissible if it is relevant. On the other hand, Rule 403 provides that court can exclude relevant evidence if its probative value is outweighed by considerations of prejudice, confusion or wastefulness. This created confusion regarding the admissibility of scientific evidence.

¹⁰⁹ *United States v. Solomon*, 753 F. 2d 1522 / 9th Circuit, 1985

¹¹⁰ *Lindsey v. United States*, Alaska 268 (9th Circuit, 1956)

¹¹¹ Satyendra K. Kaul, NARCO-ANALYSIS, BRAIN- MAPPING, HYPNOSIS AND LIE DETECTOR TESTS IN INTERROGATION OF SUSPECT (2008), Alia Law Agency, Allahabad at p. 339

¹¹² *Jerry Harrington v. State of Iowa*, 659 N.W.2d 509, 518 (Iowa 2003)

In a landmark case, *Kumho Tyre Company v. Carmichael*,¹¹³ a comprehensive evaluation of scientific expertise was done. The United States Supreme Court held that the criteria applied by the court in Daubert's case is applicable in all expert testimony without any classification between scientific and non-scientific expert testimony.

The U.S. Supreme Court has also disapproved of the forensic uses of truth-inducing drugs in *Townsend v. Sain*.¹¹⁴ In that case, a heroin addict was arrested on the suspicion of having committed robbery and murder. While in custody he began to show severe withdrawal symptoms, following which the police officials obtained the services of a physician. In order to treat these withdrawal symptoms, the physician injected a combined dosage of 1/8 grain of Phenobarbital and 1/230 grain of Hyoscine. Hyoscine is the same as 'Scopolamine' which has been described earlier. This dosage appeared to have a calming effect on Townsend and after the physician's departure he promptly responded to questioning by the police and eventually made some confessional statements. The petitioner's statements were duly recorded by a court reporter. The next day he was taken to the office of the prosecutor where he signed the transcriptions of the statements made by him on the previous day.

When the case came up for trial, the counsel for the petitioner brought a motion to exclude the transcripts of the statements from the evidence. However, the trial judge denied this motion and admitted the court reporter's transcription of the confessional statements into evidence. Subsequently, a jury found Townsend to be guilty, thereby leading to his conviction. When the petitioner made a habeas corpus application before a Federal District Court, one of the main arguments advanced was that the fact of Scopolamine's character as a truth-serum had not been brought out at the time of the motion to suppress the statements or even at the trial before the State Court. The Federal District Court denied the habeas corpus petition without a plenary evidentiary hearing, and this decision was affirmed by the Court of Appeals. Hence, the matter came before the U.S. Supreme Court. In an opinion authored by Earl Warren, C.J. the Supreme Court held that the Federal District Court had erred in denying a writ of habeas corpus without giving a plenary evidentiary hearing to examine the voluntariness of the

¹¹³ *Kumho Tyre Company v. Carmichael*, 143 Led 2d 248 (1999)

¹¹⁴ *Townsend v. Sain*, 372 US 293 (1963)

confessional statements. Both the majority opinion as well as the dissenting opinion (Stewart, J.)

On this issue, Warren, C.J. observed, 372 US 293 (1963), at pp. 307-308: “Numerous decisions of this Court have established the standards governing the admissibility of confessions into evidence. If an individual’s ‘will was overborne’ or if his confession was not ‘the product of a rational intellect and a free will’, his confession is inadmissible because coerced. These standards are applicable whether a confession is the product of physical intimidation or psychological pressure and, of course, are equally applicable to a drug-induced statement. It is difficult to imagine a situation in which a confession would be less the product of a free intellect, less voluntary, than when brought about by a drug having the effect of a ‘truth serum’. It is not significant that the drug may have been administered and the questions asked by persons unfamiliar with hyoscine’s properties as a ‘truth serum’ if these properties exist. Any questioning by police officers which in fact produces a confession which is not the product of a free intellect renders that confession inadmissible.”

Since a person subjected to the narcoanalysis technique is in a half-conscious state and loses awareness of time and place, this condition can be compared to that of a person who is in a hypnotic state. In *Horvath v. R.*¹¹⁵ the Supreme Court of Canada held that statements made in a hypnotic state were not voluntary and hence they cannot be admitted as evidence. It was also decided that if the post- hypnotic statements relate back to the contents of what was said during the hypnotic state, the subsequent statements would be inadmissible.

4.3.1.2. Polygraph

In USA, Polygraph Test is mainly conducted by the Department of Justice for various administrative, employment and investigative purposes. Nearly 11 states have enacted laws for conducting Polygraph Tests in certain cases. Presently, admissibility of scientific evidence is governed by Daubert criteria and amended Federal Rules of Evidence, which is applicable in the case of Polygraph evidence also.

The research and regulation of Polygraph Test and training of experts are much advanced in USA. American Polygraph Association and American Academy of Polygraph Examiners have

¹¹⁵ *Horvath v. R.*, [1979] 44 C.C.C. (2d) 385

made much contribution in the field of Polygraph research. The Department of Defence Polygraph Institute conducts training of all Government Polygraph examiners and has also introduced admission requirements for its Polygraph examiners. This has resulted in standardization and quality control in Polygraph examinations. Major regulatory approach adopted, is setting up licensing standards, as the results of the test is mainly based on subjective interpretation of experts. However, there is no legislation governing Polygraph in criminal justice setting.

4.3.1.3. Narco Analysis

After terrorist attack in World Trade Centre, Narco Analysis is conducted on suspects of terrorism in USA. But it is not used by law enforcement agencies and is not a popular investigative tool.

4.3.1.4. Neuro-Imaging

Presently, Brain Fingerprinting is used by Federal Bureau of Investigation. The technique was developed by Lawrence Farwell. As far as Brain Fingerprinting and FMRI evidence is concerned, though presently courts are reluctant to admit evidence, judiciary itself has expressed its intention to admit it when the tests attain scientific validity in future. Moreover, US Government is also making huge funding in Neuro Based Lie Detection Projects.¹¹⁶

4.3.1.5. LVA and Psychological Stress Evaluator

LVA Test is used by US Ministry of Defence. As early as in 1982, New Mexican Court of Appeals has held that PSE evidence is admissible in trial. The court held that trial court may admit the PSE evidence in its discretion, if the proponent of the test satisfies the conditions of qualifications of the examiner, the reliability and the validity of the test. It is also important to note that recently a federal court has approved the use of CVSA test to monitor sex offenders.¹¹⁷

4.3.2. United Kingdom

¹¹⁶ Jonathan H. Marks, "Interrogational Neuro Imaging in Counter Terrorism: A "No-Brainer" or a Human Rights Hazard?" Vol.33 (2&3), American Journal of Law and Medicine, August 2007, pp.483-500 at p.490.

¹¹⁷ "Federal Judge Approves Non-Polygraph Technology to Monitor Sex Offenders: US District Court Decision Validates CVSA Technology for Federal Agency Use," PR Newswire, March 11, 2014, available at <http://www.prnewswire.com/news-releases/federal-judge-approves-non-polygraph-technology-to-monitor-sex-offenders-249424721.html>

In England, scientific evidence is admissible if it is helpful to determine the question of controversy. It is not required in Great Britain, that the scientific evidence should be extracted from a reliable technique. It is further not required that scientific technique is accepted by the relevant scientific community. The only criterion is that of a 'helpful standard'. This helpful standard is also not uniform. It is determined by the trial judge according to his own satisfaction. Using this determination, a judge may ignore or exclude evidence if he thinks that piece of evidence is not helpful. In English court, there is liberal attitude for accepting scientific evidence.

In *R. v. Robb*,¹¹⁸ the court admitted expert scientific testimony identifying voice of accused from the conversation recorded in a tape. While expert himself stated that the technique used by him is not reliable. The court is of opinion that scientific evidence is admissible if the person giving testimony is a qualified person with training and practical experience. His testimony must bear greater value than that of ordinary layman.

There is no need of verification of scientific evidence in English Courts. In particular about Narco analysis, Polygraph and brain mapping tests neither the House of Lords nor the Privy Council had the opportunity to consider their admissibility. The use of these techniques should be interpreted in the light of these decided case laws which makes ample clear that these techniques are admissible in the Great Britain.

As far as Forensic Psychological Tests in UK is concerned, British Psychological Society in two of its reports in 1986 and 2004 had expressed its doubts regarding the accuracy of Polygraph testing. However, it may be stated that Polygraph Testing became legalized in probation settings with the passage of Offender Management Act, 2007. This Act allows the use of Polygraph tests, but in limited cases.

4.3.3. Australia

In Australia like United States, admissibility of scientific evidence is determined by the standard of admissibility. There is an act in Australia namely, Lie Detector Act, 1983. The purpose of this Act is to prevent the misuse of lie detectors by employers or insurance companies etc.

¹¹⁸ *R. v. Robb*, (1991) Cri. I.R. 539

The question regarding admissibility of scientific evidence arose in *Chamberlain v. R*,¹¹⁹ popularly known as Dingbaby's case where accused mother was charged for cutting her baby in family care and burying the child in sand.

The prosecution case was based on scientific evidence. It is after this case that a demand was raised for the settled law on admissibility of scientific evidence. This was settled to some extent by the enactment of the Federal Evidence Code, 1975 by Australian Parliament. Section 79 of the code specifically deals with the admissibility of scientific evidence based on specialized knowledge either by training, study or experience. However, under section 138 court may refuse to admit scientific evidence if the court is of opinion that the evidence might be unfairly prejudiced to a party, or it is misleading or confusing or it may cause or result in waste of time.

In *H.G.V. v. R*,¹²⁰ it was held by Australian High Court that relationship between opinion and specialized knowledge must reach such level that it could be found that the opinion is wholly or substantially based on the specialized knowledge.

¹¹⁹ *Chamberlain v. R*, 153 C.L.R. 521 (1984)

¹²⁰ *H.G.V. v. R*, (1999) 197 C.L.R. 414

CHAPTER 5
FORENSIC PSYCHOLOGICAL TESTS AND CHANGING CONTOURS OF RIGHT
AGAINST SELF-INCRIMINATION IN INDIA

5.1. Introduction

In every corner of the world, methods of law enforcement are witnessing colossal changes with progress in science and technology. Methods of investigation are witnessing rapid shifts with the amalgamation of scientific techniques and criminal procedure. In the contemporary scenario, there are many scientific tools that are available at the investigative agency's behest.

At the same time, the presumption of innocence of the accused has crucially been the mainstay rule in India. The rule casts burden on the prosecution to prove a person guilty and allows the accused to stand by and watch prosecution failing in establishing the charge conclusively and beyond all reasonable doubts. This presumption of innocence gave birth to the rule of immunity from self-incrimination under the Constitution of India.¹²¹ The rule in our Constitution is, in fact, narrower than the one applicable in the U.S.A. and the U.K. Prior to 1978, the President had powers to suspend the enforcement of any fundamental right guaranteed in Part III of the Constitution of India.¹²² However, Article 359 was amended in 1978,¹²³ and after this amendment the rights guaranteed under Article 20 and 21 cannot be suspended by President.

It goes without saying that the administration of justice and the need to control crime effectively requires the strengthening of the investigative machinery. The Courts have time and again emphasized that it is as much necessary to protect an accused person against being compelled to incriminate himself, as to arm the agents of law and the Courts of law with legitimate powers of bringing offenders to justice. As a result, several types of evidence are excluded from the purview of Article 20(3) with a view to draw a balance between the exigencies of investigation of crimes and the need to safeguard the individual from being subjected to third degree methods. Newer methods of eliciting truth and objective information, based on scientific analysis instead of coercive methods, have emerged which has the potential to change the dynamics of the traditional understanding of privilege against self-incrimination.

¹²¹ Article 20(3), the Constitution of India

¹²² Article 359, the Constitution of India

¹²³ The Constitution (44th Amendment) Act, 1978

Moreover, Article 20(3) is not applicable in cases where any sort of recovery is made, be that an object or evidence, from the possession of a person.¹²⁴

In this chapter, an attempt shall be made to holistically study the Forensic Psychological Tests and against settled and unfettered principles of law, which special reference to the Right against self-incrimination.

5.2. 'Right to Fair Trial' and Right against Self-Incrimination

The interrelationship between the 'right against self- incrimination' and the 'right to fair trial' has been recognized in most jurisdictions as well as international human rights instruments. For example, the U.S. Constitution incorporates the 'privilege against self-incrimination' in the text of its Fifth Amendment. The meaning and scope of this privilege has been judicially moulded by recognising its interrelationship with other constitutional rights such as the protection against 'unreasonable search and seizure' (Fourth amendment) and the guarantee of 'due process of law' (Fourteenth amendment).

In the International Covenant on Civil and Political Rights (ICCPR), Article 14(3)(g) enumerates the minimum guarantees that are to be accorded during a trial and states that everyone has a right not to be compelled to testify against himself or to confess guilt. In the European Convention for the Protection of Human Rights and Fundamental Freedoms, Article 6(1) states that every person charged with an offence has a right to a fair trial and Article 6(2) provides that 'Everybody charged with a criminal offence shall be presumed innocent until proved guilty according to law'.

The guarantee of 'presumption of innocence' bears a direct link to the 'right against self-incrimination' since compelling the accused person to testify would place the burden of proving innocence on the accused instead of requiring the prosecution to prove guilt.

In the Indian context, Article 20(3) should be construed with due regard for the inter-relationship between rights, since this approach was recognised in *Maneka Gandhi v. Union of India*.¹²⁵ Hence, we must examine the 'right against self-incrimination' in respect of its

¹²⁴ *M.P. Sharma v. Satish Chandra*, AIR 1954 SC 300

¹²⁵ *Maneka Gandhi v. Union of India*, (1978) 1 SCC 248

relationship with the multiple dimensions of ‘personal liberty’ under Article 21, which include guarantees such as the ‘right to fair trial’, ‘substantive due process’ and ‘right to privacy’. It must also be emphasized that Articles 20 and 21 have a non-derogable status within Part III of our Constitution as the right to move any court for the enforcement of these rights cannot be suspended even during the operation of a proclamation of emergency.¹²⁶

5.3. ‘Right to Privacy’ and Right against Self-Incrimination

There are several ways in which the involuntary administration of either of the impugned tests could be viewed as a restraint on ‘personal liberty’. The most obvious indicator of restraint is the use of physical force to ensure that an unwilling person is confined to the premises where the tests are to be conducted. Furthermore, the drug-induced revelations or the substantive inferences drawn from the measurement of the subject’s physiological responses can be described as an intrusion into the subject’s mental privacy.

It is also quite conceivable that a person could make an incriminating statement on being threatened with the prospective administration of any of these techniques. Conversely, a person who has been forcibly subjected to these techniques could be confronted with the results in a subsequent interrogation, thereby eliciting incriminating statements.

We must also account for circumstances where a person who undergoes the said tests is subsequently exposed to harmful consequences, though not of a penal nature. Concerns have already been expressed in regard to situations where the contents of the test results could prompt investigators to engage in custodial abuse, surveillance or undue harassment. There have been some instances where the investigation agencies have leaked the video-recordings of narcoanalysis interviews to media organisations. This is an especially worrisome practice since the public distribution of these recordings can expose the subject to undue social stigma and specific risks. It may even encourage acts of vigilantism in addition to a ‘trial by media’.¹²⁷

The decision given by the U.S. Supreme Court in *Rochin v. California*,¹²⁸ recognised the threshold of ‘conduct that shocks the conscience’ for deciding when the extraction of physical evidence offends the guarantee of ‘due process of law’. With regard to the facts in that case,

¹²⁶ Constitution (44th Amendment) Act, 1978

¹²⁷ *Smt. Selvi v. State of Karnataka*, AIR 2010 SC 1974

¹²⁸ *Rochin v. California*, 342 US 165 (1952)

Felix Frankfurter, J. had decided that the extraction of evidence had indeed violated the same, *Id.* at pp. 172-173: "...we are compelled to conclude that the proceedings by which this conviction was obtained do more than offend some fastidious squeamishness or private sentimentalism about combating crime too energetically. This is conduct that shocks the conscience. Illegally breaking into the privacy of the petitioner, the struggle to open his mouth and remove what was there, the forcible extraction of his stomach's contents - this course of proceeding by agents of government to obtain evidence is bound to offend even hardened sensibilities. They are methods too close to the rack and the screw to permit of constitutional differentiation...Use of involuntary verbal confessions in State criminal trials is constitutionally obnoxious not only because of their unreliability. They are inadmissible under the Due Process Clause even though statements contained in them may be independently established as true. Coerced confessions offend the community's sense of fair play and decency. So here, to sanction the brutal conduct which naturally enough was condemned by the court whose judgment is before us, would be to afford brutality the cloak of law. Nothing would be more calculated to discredit law and thereby to brutalize the temper of a society."

Following the judicial expansion of the idea of 'personal liberty', the status of 'right to privacy' as a component of Article 21 has been recognised and re-inforced. In *R. Raj Gopal v. State of Tamil Nadu*,¹²⁹ this Court dealt with a fact-situation where a convict intended to publish his autobiography which described the involvement of some politicians and businessmen in illegal activities. Since the publication of this work was challenged on grounds such as the invasion of privacy among others, the Court ruled on the said issue. It was held that the right to privacy could be described as the 'right to be let alone and a citizen has the right to safeguard the privacy of his own, his family, marriage, procreation, motherhood, child-bearing and education among others. No one can publish anything concerning the above matters without his consent whether truthful or otherwise and whether laudatory or critical'. However, it was also ruled those exceptions may be made if a person voluntarily thrusts himself into a controversy or any of these matters becomes part of public records or relates to an action of a public official concerning the discharge of his official duties.

¹²⁹ *R. Raj Gopal v. State of Tamil Nadu*, (1994) 6 SCC 632

In *People's Union for Civil Liberties v. Union of India*,¹³⁰ it was held that the unauthorised tapping of telephones by police personnel violated the 'right to privacy' as contemplated under Article 21. However, it was not stated that telephone-tapping by the police was absolutely prohibited, presumably because the same may be necessary in some circumstances to prevent criminal acts and in the course of investigation. Hence, such intrusive practices are permissible if done under a proper legislative mandate that regulates their use. This intended balance between an individual's 'right to privacy' and 'compelling public interest' has frequently occupied judicial attention. Such a compelling public interest can be identified with the need to prevent crimes and expedite investigations or to protect public health or morality.

In *R v. Chief Constable of South Yorkshire*,¹³¹ the Court of Appeal (United Kingdom), the contentious issues arose in respect of the retention of fingerprints and DNA samples taken from persons who had been suspected of having committed offences in the past but were not convicted for them. It was argued that this policy violated Articles 8 and 14 of the European Convention on Human Rights and Fundamental Freedoms, 1950. Article 8 deals with the 'Right to respect for private and family life' while Article 14 lays down the scope of the 'Prohibition Against Discrimination'.

Therefore, subjecting a person to the impugned techniques in an involuntary manner violates the prescribed boundaries of privacy. The same was re-iterated in the recent judgment, *Justice K. S. Puttaswamy (Retd.) v. Union of India*,¹³² wherein 'right to privacy' was read as an intrinsic aspect of Article 21 of the Constitution of India. Forcible interference with a person's mental processes is not provided for under any statute and it most certainly comes into conflict with the 'right against self-incrimination'. However, this determination does not account for circumstances where a person could be subjected to any of the impugned tests but not exposed to criminal charges and the possibility of conviction. In such cases, he/she could still face adverse consequences such as custodial abuse, surveillance, undue harassment and social stigma among others. In order to address such circumstances, it is important to examine some other dimensions of Article 21.

5.4. Right of the Accused against Cruel, Inhuman or Degrading Treatment

¹³⁰ *People's Union for Civil Liberties v. Union of India*, AIR 1997 SC 568

¹³¹ *R v. Chief Constable of South Yorkshire*, (2003) 1 All ER 148 (CA)

¹³² *Justice K. S. Puttaswamy (Retd.) v. Union of India*, (2017) 10 SCC 1

The pertinent question whether the act of forcibly subjecting a person to any of the impugned techniques constitutes ‘cruel, inhuman or degrading treatment’ must also be considered. This inquiry will account for the permissibility of these techniques in all settings, including those where a person may not be subsequently prosecuted but could face adverse consequences of a non-penal nature.

It is argued that the use of the impugned techniques amounts to ‘cruel, inhuman or degrading treatment’. Even though the Constitution of India does not explicitly enumerate a protection against ‘cruel, inhuman or degrading punishment or treatment’ in a manner akin to the Eighth Amendment of the U.S. Constitution, but the essence of this right has been discussed and reaffirmed in various Indian judgments.

For example, in *Sunil Batra v. Delhi Administration*,¹³³ the Hon’ble Supreme Court of India observed that our Constitution has no direct mention of the ‘due process’ clause or the VIII Amendment, but in this branch of law, after *R. C. Cooper v. Union of India*,¹³⁴ and *Maneka Gandhi v. Union of India*,¹³⁵ the consequential legal position is none different. For what is punitively outrageous, scandalizing, cruel and counterproductive, is unarguably unreasonable and arbitrary and is shot down by Article 14 and 19 and if inflicted with procedural unfairness, falls foul of Article 21. Part III of the Constitution does not part company with the prisoner at the gates, and judicial oversight protects the prisoner’s shrunken fundamental rights, if flouted, frowned upon or frozen by the prison authority.¹³⁶

In *R. C. Cooper* and *Maneka Gandhi* cases, the Hon’ble Supreme Court had disapproved of practices such as solitary-confinement and the use of bar-fetters in prisons. It was held that prisoners were also entitled to ‘personal liberty’ though in a limited sense, and hence judges could enquire into the reasonableness of their treatment by prison-authorities. Even though ‘the right against cruel, inhuman and degrading punishment’ cannot be asserted in an absolute sense, there is a sufficient basis to show that Article 21 can be invoked to protect the ‘bodily integrity and dignity’ of persons who are in custodial environments.

¹³³ *Sunil Batra v. Delhi Administration*, (1978) 4 SCC 494, at pp. 518-519

¹³⁴ *R. C. Cooper v. Union of India*, (1970) 1 SCC 248

¹³⁵ *Maneka Gandhi v. Union of India*, (1978) 1 SCC 248

¹³⁶ *Smt. Selvi v. State of Karnataka*, AIR 2010 SC 1974

This protection extends not only to prisoners who are convicts and under-trials, but also to those persons who may be arrested or detained in the course of investigations in criminal cases. Judgments such as *D.K. Basu v. State of West Bengal*,¹³⁷ have stressed upon the importance of preventing the ‘cruel, inhuman or degrading treatment’ of any person who is taken into custody.

5.5. Right against Self-Incrimination – Broad Interpretation by Indian Judiciary

The question of whether Article 20(3) should be narrowly construed as a trial right or a broad protection that extends to the stage of investigation has been conclusively answered by our Courts.

In *M. P. Sharma v. Satish Chandra*,¹³⁸ it was held that the guarantee in Article 20(3) is against ‘testimonial compulsion’. It was suggested that this is confined to the oral evidence of a person standing his trial for an offence when called to the witness-stand. However, in *Smt. Selvi & Ors. v. State of Karnataka*,¹³⁹ the Hon’ble Supreme Court drifted away from this literal import and observed thus “We can see no reason to confine the content of the constitutional guarantee to this barely literal import. So, to limit it would be to rob the guarantee of its substantial purpose and to miss the substance for the sound as stated in certain American decisions...Indeed, every positive volitional act which furnished evidence is testimony, and testimonial compulsion connotes coercion which procures the positive volitional evidentiary acts of the person, as opposed to the negative attitude of silence or submission on his part. Nor is there any reason to think that the protection in respect of the evidence so procured is confined to what transpires at the trial in the court room.”

The phrase used in Article 20(3) is ‘to be a witness’ and not to ‘appear as a witness’: It follows that the protection afforded to an accused in so far as it is related to the phrase ‘to be a witness’ is not merely in respect of testimonial compulsion in the court room but may well extend to compelled testimony previously obtained from him. It is available therefore to a person against

¹³⁷ *D.K. Basu v. State of West Bengal*, AIR 1997 SC 610

¹³⁸ *M. P. Sharma v. Satish Chandra*, [1954] SCR 1077, at pp. 1087-1088

¹³⁹ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

whom a formal accusation relating to the commission of an offence has been levelled which in the normal course may result in prosecution.¹⁴⁰

In *State of Bombay v. Kathi Kalu Oghad & Others*,¹⁴¹ these observations were cited with approval by B.P. Sinha, C.J. In the minority opinion, Das Gupta, J. affirmed the same position, as extracted: “...If the protection was intended to be confined to being a witness in Court, then really it would have been an idle protection. It would be completely defeated by compelling a person to give all the evidence outside court and then, having what he was so compelled to do proved in court through other witnesses. An interpretation which so completely defeats the constitutional guarantee cannot, of course, be correct. The contention that the protection afforded by Article 20(3) is limited to the stage of trial must therefore be rejected.”

The broader view of Article 20(3) was consolidated in *Nandini Satpathy v. P. L. Dani*.¹⁴² The Hon’ble Supreme Court held that “...Any giving of evidence, any furnishing of information, if likely to have an incriminating impact, answers the description of being a witness against oneself. Not being limited to the forensic stage by express words in Article 20(3), we have to construe the expression to apply to every stage where furnishing of information and collection of materials takes place. That is to say, even the investigation at the police level is embraced by Article 20(3). This is precisely what Section 161(2) of the Code of Criminal Procedure, 1973 means. That subsection relates to oral examination by police officers and grants immunity at that stage. Briefly, the Constitution and the Code are co-terminus in the protective area. While the code may be changed, the Constitution is more enduring. Therefore, we have to base our conclusion not merely upon Section 161(2) but on the more fundamental protection, although equal in ambit, contained in Article 20(3).”

In upholding this broad view of Article 20(3), V.R. Krishna Iyer, J. relied heavily on the decision of the US Supreme Court in *Miranda v. Arizona*.¹⁴³ The majority opinion (by Earl Warren, C.J.) laid down that, custodial statements could not be used as evidence unless the police officers had administered warnings about the accused’s right to remain silent. The decision also recognized the right to consult a lawyer prior to and during the course of custodial

¹⁴⁰ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

¹⁴¹ *State of Bombay v. Kathi Kalu Oghad & Others*, [1962] 3 SCR 10, at pp. 26-28

¹⁴² *Nandini Satpathy v. P. L. Dani*, (1978) 2 SCC 424, at p. 435

¹⁴³ *Miranda v. Arizona*, 384 US 436 (1966)

interrogations. The practice promoted by this case is that it is only after a person has 'knowingly and intelligently' waived of these rights after receiving a warning that the statements made thereafter can be admitted as evidence.

These safeguards were designed to mitigate the disadvantages faced by a suspect in a custodial environment. This was done in recognition of the fact that methods involving deception and psychological pressure were routinely used and often encouraged in police interrogations. Emphasis was placed on the ability of the person being questioned to fully comprehend and understand the content of the stipulated warning. It is obvious that such an interrogation environment is created for no purpose other than to subjugate the individual to the will of his examiner. This atmosphere carries its own badge of intimidation. To be sure, this is not physical intimidation, but it is equally destructive of human dignity.¹⁴⁴ Unless adequate protective devices are employed to dispel the compulsion inherent in custodial surroundings, no statement obtained from the defendant can truly be the product of his free choice. The current practice of incommunicado interrogation is at odds with America's most cherished principles - that the individual may not be compelled to incriminate himself.¹⁴⁵

The majority decision in *Miranda* was not a sudden development in U.S. constitutional law. The scope of the privilege against self-incrimination had been progressively expanded in several prior decisions. The notable feature was the recognition of the interrelationship between the Fifth Amendment and the Fourteenth Amendment's guarantee that the government must observe the 'due process of law' as well as the Fourth Amendment's protection against 'unreasonable search and seizure'. Thus, it will suffice to say that after *Miranda* case, administering a warning about a person's right to silence during custodial interrogations as well as obtaining a voluntary waiver of the prescribed rights has become a ubiquitous feature in America's criminal justice system. In the absence of such a warning and voluntary waiver, there is a presumption of compulsion with regard to the custodial statements, thereby rendering them inadmissible as evidence.

The position in India is different since there is no automatic presumption of compulsion in respect of custodial statements. At this juncture, it must be reiterated that Indian law

¹⁴⁴ Sutherland, *Crime and Confessions*, 79 Harvard Law Review 21, 37 (1965)

¹⁴⁵ *Ibid.*

incorporates the ‘rule against adverse inferences from silence’ which is operative at the trial stage. This position is embodied in a conjunctive reading of Article 20(3) of the Constitution and Sections 161(2), 313(3) and Proviso (b) of Section 315(1) of the CrPC.¹⁴⁶ The gist of this position is that even though an accused is a competent witness in his/her own trial, he/she cannot be compelled to answer questions that could expose him/her to incrimination and the trial judge cannot draw adverse inferences from the refusal to do so. This position is cemented by prohibiting any of the parties from commenting on the failure of the accused to give evidence.

This rule was lucidly explained in the English case of *Woolmington v. DPP*,¹⁴⁷ that the ‘right to silence’ is a principle of common law and it means that normally courts or tribunals of fact should not be invited or encouraged to conclude, by parties or prosecutors, that a suspect or an accused is guilty merely because he has refused to respond to questions put to him by the police or by the Court.

The Law Commission of India¹⁴⁸ dealt with this very issue. It considered arguments for diluting the ‘rule against adverse inferences from silence’. Apart from surveying several foreign statutes and decisions, the report took note of the fact that Section 342(2) of the erstwhile Code of Criminal Procedure, 1898 permitted the trial judge to draw an inference from the silence of the accused. However, this position was changed with the enactment of the new Code of Criminal Procedure in 1973, thereby prohibiting the making of comments as well as the drawing of inferences from the fact of an accused’s silence. In light of this, the report concluded: “... We have reviewed the law in other countries as well as in India for the purpose of examining whether any amendments are necessary in the Code of Criminal Procedure, 1973. On a review, we find that no changes in the law relating to silence of the accused are necessary and if made, they will be ultra vires of Article 20(3) and Article 21 of the Constitution of India. We recommend accordingly.”

5.6. Limitations of Article 20(3) restricted to Physical Evidence

The contours of the right against self-incrimination under Article 20(3) of the Constitution of India has been narrowed down by the Indian Judiciary in various notable judgments.

¹⁴⁶ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

¹⁴⁷ *Woolmington v. DPP*, (1935) AC 462, at p. 481

¹⁴⁸ Law Commission of India, 180th Report (May, 2002)

In *People's Union for Civil Liberties v. Union of India*,¹⁴⁹ the Hon'ble Supreme Court held that a person becomes witness only when he makes oral or written statements in or out of court relating to any person who is accused of an offence. The giving of any sort of identification as for instance impression of thumb or foot or palm or fingers or giving of specimen of handwriting is not at all covered under Article 20(3). For testimonial compulsion it is essential that a person forwards his personal knowledge about happening or non-happening of an event. The perfunctory practice of producing documents which may throw light on any of the controversial points does not amount to self-incrimination.¹⁵⁰

In *State of U.P v. Boota Singh*,¹⁵¹ the Apex Court held that if directions are issued to the accused to give his specimen signatures and handwriting that does not amount to testimonial compulsion similar is the case with scientific evidence because accused is just directed to undergo a test not to give a specific statement. It can be termed as a search of the person being conducted by experts and in India search and seizures are not held violative of Article 20(3) because it is not an act of the accused, but a third person is doing that act i.e., the police officer or an expert. An accused is obliged to submit to the concerned authority be those police or investigating authority, and therefore, submission of accused to the authorities cannot in any case amount to his testimonial act.¹⁵²

General statements given by any person at some regular inquiry or investigation without formal charges being framed against accused would not attract Article 20(3) even if that statement turns out to be incriminatory at some later stage.¹⁵³

In *Dinesh Dalmia v. State of Maharashtra*,¹⁵⁴ it was ruled that "Narco-analysis testimony was not by compulsion because the accused may be taken to the laboratory for such tests against his will, but the revelation during such tests is quite voluntary". The Bombay High Court, in *Ramchandra Reddy and Ors. v. State of Maharashtra*,¹⁵⁵ upheld the legality of the use of P300 or Brain finger-printing, lie-detector test and the use of truth serum or Narco analysis.

¹⁴⁹ *People's Union for Civil Liberties v. Union of India*, AIR 2004 SC 456

¹⁵⁰ *State of Bombay v. Kathi Kalu Oghad*, AIR 1961 SC 1808

¹⁵¹ *State of U.P v. Boota Singh*, AIR 1978 SC 1770

¹⁵² *State of Gujarat v. Shamlal*, AIR 1965 SC 1251

¹⁵³ *Veera v. State of Maharashtra*, AIR 1976 SC 1167

¹⁵⁴ *Dinesh Dalmia v. State of Maharashtra*, Cr. L.J. (2006) 2401

¹⁵⁵ *Ramchandra Reddy and Ors. v. State of Maharashtra*, Cr. W.P (c) No. 1924 of 2003

Furthermore, Medical Examination of the accused is not barred under Article 20(3),¹⁵⁶ even drawing of blood samples, pubic hair etc. in the offence of rape, where prosecution has to establish the guilt of accused beyond reasonable doubt is not held to be violative of Article 20(3),¹⁵⁷ because right to fair investigation is a fundamental right,¹⁵⁸ that no victim should be derived to especially in a criminal case. It is humbly submitted that scientific evidence in such a scenario would provide a great help to investigation authorities in exhuming the truth from accused and establishing the guilt beyond reasonable doubt.

In *Ritesh Sinha v. State of Uttar Pradesh*,¹⁵⁹ the Supreme Court held that the Judicial Magistrate can direct an accused to provide his voice samples for investigation even without his consent.

In *Harjinder Kaur v. State of Punjab*,¹⁶⁰ the Punjab and Haryana High Court held that subjecting an accused to DNA test does not violate Article 20(3). It is out of question that any infringement of right against testimonial compulsion occurs if the court requires a person male or female to submit to DNA, the courts can do so validly. The question arises that when courts can compel an accused for DNA tests; to give specimen signatures, hand, palm, foot impressions, there should be no hesitation in subjecting accused to Narco-analysis, polygraph and brain mapping tests as these techniques would help in efficient investigations and inquiries by authorities.

In *Usufalli v. State of Maharashtra*,¹⁶¹ it was held by Supreme Court, that tape-recording of statements of accused is not violation of Article 20(3) even if the recording is done without consent and knowledge of accused. This recording may be used against accused but it would not attract Article 20(3) reason being there is no presence of compulsion here.

In the past, the meaning and scope of the term ‘investigation’ has been held to include measures that had not been enumerated in statutory provisions. For example, prior to the

¹⁵⁶ *State v. Navjot Sandhu*, (2005) 11 SCC 600.

¹⁵⁷ *Halappa v. State of Karnataka*, 2011(7) RCR (Criminal) 29 Karnataka

¹⁵⁸ *Virbhadra Singh v. State of H.P.*, 2011(1) RCR (Criminal) 396 (Ho.)

¹⁵⁹ *Ritesh Sinha v. State of Uttar Pradesh*, AIR 2019 SC 3592

¹⁶⁰ *Harjinder Kaur v. State of Punjab*, 2013(2) RCR (Criminal) 146 (P and H)

¹⁶¹ *Usufalli v. State of Maharashtra*, AIR 1968 SC 147

enactment of an express provision for medical examination in the Code of Criminal Procedure, 1973, it was observed in *Mahipal Maderna v. State of Maharashtra*,¹⁶² that an order requiring the production of a hair sample comes within the ordinary understanding of ‘investigation’.

We must also take note of the decision in *Jamshed v. State of Uttar Pradesh*,¹⁶³ wherein it was held that a blood sample can be compulsorily extracted during a ‘medical examination’ conducted under Section 53 of the Code of Criminal Procedure, 1973. At that time, the collection of blood samples was not expressly contemplated in the said provision. Nevertheless, the Court had ruled that the phrase ‘examination of a person’ should be read liberally so as to include an examination of what is externally visible on a body as well as the examination of an organ inside the body.

5.7. Statutory Limitations on the Power of Investigation in India

Despite the aforesaid discussion on the judicial prescribed limits to the contours of Article 20(3) of the Constitution, there are certain inherent limitations as to the powers of investigation in India.

It must be noted that all citizens have an obligation to co-operate with ongoing investigations. For instance, Section 39 of the Code of Criminal Procedure, 1973, which places a duty on citizens to inform the nearest magistrate or police officer if they are aware of the commission of, or of the intention of any other person to commit the crimes enumerated in the section. Section 156(1), of the Code of Criminal Procedure, 1973, which states that a police officer in charge of a police station is empowered to investigate cognizable offences even without an order from the jurisdictional magistrate. Likewise, Section 161(1), of the Code of Criminal Procedure, 1973, which empowers the police officer investigating a case to orally examine any person who is supposed to be acquainted with the facts and circumstances of the case. While the overall intent of these provisions is to ensure the citizens’ cooperation during the course of investigation, they cannot override the constitutional protections given to accused persons.

¹⁶² *Mahipal Maderna v. State of Maharashtra*, 1971 Cri L J 1405 (Bom), at pp. 1409-1410, Para. 17

¹⁶³ *Jamshed v. State of Uttar Pradesh*, 1976 Cri L J 1680 (All), at p. 1689, Para 13

The scheme of the Code of Criminal Procedure, 1973, itself acknowledges this hierarchy between constitutional and statutory provisions in this regard. For instance, Section 161(2), prescribes that when a person is being examined by a police officer, he is not bound to answer such questions, the answers of which would have a tendency to expose him to a criminal charge or a penalty or forfeiture.

Not only does an accused person have the right to refuse to answer any question that may lead to incrimination, but there is also a rule against adverse inferences being drawn from the fact of his/her silence. At the trial stage, Section 313(3) of the Code of Criminal Procedure, 1973, places a crucial limitation on the power of the court to put questions to the accused so that the latter may explain any circumstances appearing in the evidence against him. It lays down that the accused shall not render himself/herself liable to punishment by refusing to answer such questions, or by giving false answers to them. Further, Proviso (b) to Section 315(1) of Code of Criminal Procedure, 1973, mandates that even though an accused person can be a competent witness for the defence, his/her failure to give evidence shall not be made the subject of any comment by any of the parties or the court or give rise to any presumption against himself or any person charged together with him at the trial. It is evident that Section 161(2) of the Code of Criminal Procedure, 1973, enables a person to choose silence in response to questioning by a police officer during the stage of investigation, and as per the scheme of Section 313(3) and Proviso (b) to Section 315(1) of the same code, adverse inferences cannot be drawn on account of the accused person's silence during the trial stage.

In the present day, the inquisitorial conception of the defendant being the best source of evidence has long been displaced with the evolution of adversarial procedure in the common law tradition. Criminal defendants have been given protections such as the presumption of innocence, right to counsel, the right to be informed of charges, the right of compulsory process and the standard of proving guilt beyond reasonable doubt among others.

5.8. Conscious omission of 'Forensic Psychological Tests' in the Code of Criminal Procedure, 1973

The proponents in favour of Forensic Psychological Tests and Psychiatric evaluation and its integration in the Indian Criminal Justice system argue that the impugned techniques should

be read into the relevant provisions, i.e., Sections 53 and 54 of the Code of Criminal Procedure, 1973. As described earlier, a medical examination of an arrested person can be directed during the course of an investigation, either at the instance of the investigating officer or the arrested person. It has also been clarified that it is within the powers of a court to direct such a medical examination on its own. Such an examination can also be directed in respect of a person who has been released from custody on bail as well as a person who has been granted anticipatory bail.

Furthermore, Section 53 contemplates the use of 'force as is reasonably necessary' for conducting a medical examination. This means that once a court has directed the medical examination of a particular person, it is within the powers of the investigators and the examiners to resort to a reasonable degree of physical force for conducting the same.

The contentious provision is the Explanation to Sections 53, 53A and 54 of the Code of Criminal Procedure, 1973 (as amended in 2005). It has been contended that the phrase 'modern and scientific techniques including DNA profiling and such other tests' should be liberally construed to include the impugned techniques. It can be argued that even though the narcoanalysis technique, polygraph examination and the BEAP test have not been expressly enumerated, they could be read in by examining the legislative intent. The phrase 'and such other tests' to argue that the Parliament had chosen an approach where the list of 'modern and scientific techniques' contemplated was illustrative and not exhaustive.

However, in *Smt. Selvi v. State of Karnataka*,¹⁶⁴ the Hon'ble Supreme Court of India observed that the results of the impugned tests should be treated as testimonial acts for the purpose of invoking the right against self-incrimination. Therefore, it would be prudent to state that the phrase 'and such other tests' [which appears in the Explanation to Sections 53, 53A and 54 of the CrPC] should be read so as to confine its meaning to include only those tests which involve the examination of physical evidence. In pursuance of this line of reasoning, The Supreme Court relied on the applicability of the rule of 'ejusdem generis'. It should also be noted that the Explanation to Sections 53, 53A and 54 of the Code of Criminal Procedure, 1973, does not enumerate certain other forms of medical examination that involve testimonial acts, such as psychiatric examination among others. This demonstrates that the amendment to this provision

¹⁶⁴ *Smt. Selvi v. State of Karnataka*, AIR 2010 SC 1974

was informed by a rational distinction between the examination of physical substances and testimonial acts.

In light of aforesaid reasons, there are some clear obstructions to the dynamic interpretation of the amended Explanation to Sections 53, 53A and 54 of the Code of Criminal Procedure, 1973. Firstly, the general words in question, i.e., ‘and such other tests’ should ordinarily be read to include tests which are in the same genus as the other forms of medical examination that have been specified. Since all the explicit references are to the examination of bodily substances, we cannot readily construe the said phrase to include the impugned tests because the latter seem to involve testimonial responses. Secondly, the compulsory administration of the impugned techniques is not the only means for ensuring an expeditious investigation. Furthermore, there is also a safe presumption that Parliament was well aware of the existence of the impugned techniques but deliberately chose not to enumerate them. Hence, on an aggregate understanding of the materials produced before us we lean towards the view that the impugned tests, i.e., the narcoanalysis technique, polygraph examination and the BEAP test should not be read into the provisions for ‘medical examination’ under the Code of Criminal Procedure, 1973.

However, it must be borne in mind that even though the impugned techniques have not been expressly enumerated in the Code of Criminal Procedure 1973, there is no statutory prohibition against them either. It is a clear case of silence in the law. Furthermore, in circumstances where an individual consents to undergo these tests, there is no dilution of Article 20(3).

5.9. Impact of Forensic Psychological Tests on Right against Self-Incrimination

Proponents of Forensic Psychological Tests and Psychiatric Evaluation argue that the compulsory administration of the impugned tests will only be sought to boost investigation efforts and that the test results by themselves will not be admissible as evidence.

The next prong of this position is that if the test results enable the investigators to discover independent materials that are relevant to the case, such subsequently discovered materials should be admissible during trial. The pertinent question that arises here is that whether the results derived from impugned techniques amount to ‘testimonial compulsion’ or not, thereby attracting the bar of Article 20(3).

It must be noted beforehand that apart from the apparent distinction between evidence of a testimonial and physical nature, some forms of testimonial acts lie outside the scope of Article 20(3). For instance, even though acts such as compulsorily obtaining specimen signatures and handwriting samples are testimonial in nature, they are not incriminating by themselves if they are used for the purpose of identification or corroboration with facts or materials that the investigators are already acquainted with. The relevant consideration for extending the protection of Article 20(3) is whether the materials are likely to lead to incrimination by themselves or ‘furnish a link in the chain of evidence’ which could lead to the same result. Hence, reliance on the contents of compelled testimony comes within the prohibition of Article 20(3) but its use for the purpose of identification or corroboration with facts already known to the investigators is not barred. To ascertain whether these tests lie outside the protective scope of Article 20(3), an understanding of the concept of ‘testimonial compulsion’ is imperative.

5.9.1. Concept of Testimonial Compulsion

The question of what constitutes ‘testimonial compulsion’ for the purpose of Article 20(3) was addressed in *M. P. Sharma v. Satish Chandra*.¹⁶⁵ In this case, the Court considered whether the issuance of search warrants in the course of an investigation into the affairs of a company (following allegations of misappropriation and embezzlement) amounted to an infringement of Article 20(3). The search warrants issued under Section 96 of the erstwhile Code of Criminal Procedure, 1898 authorised the investigating agencies to search the premises and seize the documents maintained by the said company. The relevant observations made in the case are extracted herein: “...The phrase used in Article 20(3) is ‘to be a witness’. A person can ‘be a witness’ not merely by giving oral evidence but also by producing documents or making intelligible gestures as in the case of a dumb witness.¹⁶⁶ ‘To be a witness’ is nothing more than ‘to furnish evidence’, and such evidence can be furnished through the lips or by production of a thing or of a document or in other modes...Indeed, every positive volitional act which furnishes evidence is testimony, and testimonial compulsion connotes coercion which procures the positive volitional evidentiary acts of the person, as opposed to the negative attitude of silence or submission on his part...”

¹⁶⁵ *M. P. Sharma v. Satish Chandra*, (1954) 1 SCR 1077

¹⁶⁶ Section 119, Indian Evidence Act, 1872

These observations suggest that the phrase ‘to be a witness’ is not confined to oral testimony for the purpose of invoking Article 20(3) and that it includes certain non-verbal forms of conduct such as the production of documents and the making of intelligible gestures.

However, in *State of Bombay v. Kathi Kalu Oghad & Others*,¹⁶⁷ there was a disagreement between the majority and minority opinions on whether the expression ‘to be a witness’ was the same as ‘to furnish evidence’. In that case, this Court had examined whether certain statutory provisions, namely - Section 73 of the Evidence Act, Sections 5 and 6 of the Identification of Prisoners Act, 1920 and Section 27 of the Evidence Act were compatible with Article 20(3). Section 73 of the Evidence Act empowered courts to obtain specimen handwriting or signatures and finger impressions of an accused person for purposes of comparison. Sections 5 and 6 of the Identification of Prisoners Act empowered a Magistrate to obtain the photograph or measurements of an accused person. In respect of Section 27 of the Evidence Act, there was an agreement between the majority and the minority opinions that the use of compulsion to extract custodial statements amounts to an exception to the ‘theory of confirmation by subsequent facts’.

Since the majority decision in *Kathi Kalu Oghad* case,¹⁶⁸ is the controlling precedent, it will be useful to re-state the two main premises for understanding the scope of ‘testimonial compulsion’. The first is that ordinarily it is the oral or written statements which convey the personal knowledge of a person in respect of relevant facts that amount to ‘personal testimony’ thereby coming within the prohibition contemplated by Article 20(3). In most cases, such ‘personal testimony’ can be readily distinguished from material evidence such as bodily substances and other physical objects. The second premise is that in some cases, oral or written statements can be relied upon but only for the purpose of identification or comparison with facts and materials that are already in the possession of the investigators. The bar of Article 20(3) can be invoked when the statements are likely to lead to incrimination by themselves or ‘furnish a link in the chain of evidence’ needed to do so.

¹⁶⁷ *State of Bombay v. Kathi Kalu Oghad & Others*, [1962] 3 SCR 10

¹⁶⁸ *Ibid.*

5.9.2. Whether Narco-Analysis offends Right against self-Incrimination?

It has been held that narcoanalysis technique involves a testimonial act.¹⁶⁹ A subject is encouraged to speak in a drug-induced state, and there is no reason why such an act should be treated any differently from verbal answers during an ordinary interrogation. In one of the impugned judgments, the compulsory administration of the narcoanalysis technique was defended on the ground that at the time of conducting the test, it is not known whether the results will eventually prove to be inculpatory or exculpatory. This reasoning was rejected in the Selvi case, and it was clearly held that narco-analysis triggers the protection of Article 20(3).

However, an unresolved question is whether the results obtained through polygraph examination and the BEAP test are of a testimonial nature. In both these tests, inferences are drawn from the physiological responses of the subject and no direct reliance is placed on verbal responses. In some forms of polygraph examination, the subject may be required to offer verbal answers such as 'Yes' or 'No', but the results are based on the measurement of changes in several physiological characteristics rather than these verbal responses. In the BEAP test, the subject is not required to give any verbal responses at all, and inferences are drawn from the measurement of electrical activity in the brain.

5.9.3. Whether Polygraph and BEAP offend Right against Self-Incrimination?

It has already been discussed that the narcoanalysis test includes substantial reliance on verbal statements by the test subject and hence its involuntary administration offends the 'right against self-incrimination'.

The crucial test laid down in Kathi Kalu Oghad case,¹⁷⁰ is that of 'imparting knowledge in respect of relevant fact by means of oral statements or statements in writing, by a person who has personal knowledge of the facts to be communicated to a court or to a person holding an enquiry or investigation'. The difficulty arises since the majority opinion in that case appears to confine the understanding of 'personal testimony' to the conveyance of personal knowledge through oral statements or statements in writing.

¹⁶⁹ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

¹⁷⁰ *Ibid.*

The results obtained from polygraph examination or a BEAP test are not in the nature of oral or written statements. Instead, inferences are drawn from the measurement of physiological responses recorded during the performance of these tests. It could also be argued that tests such as polygraph examination and the BEAP test do not involve a 'positive volitional act' on part of the test subject and hence their results should not be treated as testimony. However, this does not entail that the results of these two tests should be likened to physical evidence and thereby excluded from the protective scope of Article 20(3).

The substance of the decision in *Kathi Kalu Oghad*, which equated a testimonial act with the imparting of knowledge by a person who has personal knowledge of the facts that are in issue. It has been recognised in other decisions that such personal knowledge about relevant facts can also be communicated through means other than oral or written statements. For example, in *M.P. Sharma's* case, it was noted that "...evidence can be furnished through the lips or by production of a thing or of a document or in other modes"

Furthermore, common sense dictates those certain communicative gestures such as pointing or nodding can also convey personal knowledge about a relevant fact, without offering a verbal response. It is quite foreseeable that such a communicative gesture may by itself expose a person to 'criminal charges or penalties' or furnish a link in the chain of evidence needed for prosecution.

Even though the actual process of undergoing a polygraph examination or a BEAP test is not the same as that of making an oral or written statement, the consequences are similar. By making inferences from the results of these tests, the examiner is able to derive knowledge from the subject's mind which otherwise would not have become available to the investigators. These two tests are different from medical examination and the analysis of bodily substances such as blood, semen and hair samples, since the test subject's physiological responses are directly correlated to mental faculties. Through lie-detection or gauging a subject's familiarity with the stimuli, personal knowledge is conveyed in respect of a relevant fact. It is also significant that unlike the case of documents, the investigators cannot possibly have any prior knowledge of the test subject's thoughts and memories, either in the actual or constructive sense.

During the administration of a polygraph test or a BEAP test, the subject makes a mental effort which is accompanied by certain physiological responses. The measurement of these responses then becomes the basis of the transmission of knowledge to the investigators. This knowledge may aid an ongoing investigation or lead to the discovery of fresh evidence which could then be used to prosecute the test subject. In any case, the compulsory administration of the impugned tests impedes the subject's right to choose between remaining silent and offering substantive information. The requirement of a 'positive volitional act' becomes irrelevant since the subject is compelled to convey personal knowledge irrespective of his/her own volition.

Some academicians have also argued that the results obtained from tests such as polygraph examination are 'testimonial' acts that should come within the prohibition of the right against self-incrimination.

For instance, Michael S. Pardo,¹⁷¹ has observed that "The results of polygraphs and other lie-detection tests, whether they call for a voluntary response or not, are testimonial because the tests are just inductive evidence of the defendant's epistemic state. They are evidence that purports to tell us either: (1) that we can or cannot rely on the assertions made by the defendant and for which he has represented himself to be an authority, or (2) what propositions the defendant would assume authority for and would invite reliance upon, were he to testify truthfully."

Ronald J. Allen and M. Kristin Mace,¹⁷² have offered a theory that the right against self-incrimination is meant to protect an individual in a situation where the State places reliance on the 'substantive results of cognition'. The following definition of 'cognition' has been articulated to explain this position. "Cognition is used herein to refer to these intellectual processes that allow one to gain and make use of substantive knowledge and to compare one's 'inner world' (previous knowledge) with the 'outside world' (stimuli such as questions from an interrogator). Excluded are simple psychological responses to stimuli such as fear,

¹⁷¹ Michael S. Pardo, 'Self- Incrimination and the Epistemology of Testimony', 30 *Cardozo Law Review* 1023-1046 (December 2008) at p. 1046

¹⁷² Ronald J. Allen and M. Kristin Mace, 'The Self-Incrimination Clause explained and its future predicted', 94 *Journal of Criminal Law and Criminology* 243-293 (2004), Fn. 16 at p. 247

warmness, and hunger: the mental processes that produce muscular movements; and one's will or faculty for choice..."

The above-mentioned authors have taken a hypothetical example where the inferences drawn from an involuntary polygraph test that did not require verbal answers, led to the discovery of incriminating evidence. They have argued that if the scope of the Fifth Amendment extends to protecting the subject in respect of 'substantive results of cognition', then reliance on polygraph test results would violate the said right. A similar conclusion has also been made by the National Human Rights Commission, as evident from the following extract in the Guidelines Relating to Administration of Polygraph Test [Lie Detector Test] on an Accused (2000): "The extent and nature of the 'self-incrimination' is wide enough to cover the kinds of statements that were sought to be induced."

In *M.P. Sharma case*,¹⁷³ the Supreme Court included within the protection of the self-incrimination rule all positive volitional acts which furnish evidence. This by itself would have made all or any interrogation impossible. The test, as stated in *Kathi Kalu*,¹⁷⁴ retains the requirement of personal volition and states that 'self-incrimination' must mean conveying information based upon the personal knowledge of the person giving information. By either test, the information sought to be elicited in a Lie Detector Test is information in the personal knowledge of the accused.

In light of the preceding judgment, the results obtained from tests such as polygraph examination and the BEAP test should also be treated as 'personal testimony', since they are a means for 'imparting personal knowledge about relevant facts'. Hence, results obtained through the involuntary administration of either of the impugned tests (i.e., the narcoanalysis technique, polygraph examination and the BEAP test) come within the scope of 'testimonial compulsion', thereby attracting the protective shield of Article 20(3).¹⁷⁵

¹⁷³ *M.P. Sharma v. Satish Chandra*, AIR 1954 SC 300

¹⁷⁴ *State of Bombay v. Kathi Kalu Oghad*, AIR 1961 SC 1808

¹⁷⁵ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

5.9.4. Invasiveness of the Forensic Psychological Tests

In respect of the invasiveness of the Forensic Psychological Tests and Psychiatric Evaluation, any person who is forcibly subjected to the impugned tests in the environs of a forensic laboratory or a hospital would be effectively in a custodial environment for the same.¹⁷⁶

The presumption of the person being in a custodial environment will apply irrespective of whether he/she has been formally accused or is a suspect or a witness. Even if there is no overbearing police presence, the fact of physical confinement and the involuntary administration of the tests is sufficient to constitute a custodial environment for the purpose of attracting Article 20(3) and Article 21. It was necessary to clarify this aspect because we are aware of certain instances where persons are questioned in the course of investigations without being brought on the record as witnesses. Such omissions on part of investigating agencies should not be allowed to become a ground for denying the protections that are available to a person in custody.

Proponents in favour of forensic techniques suggest that in the case of the impugned techniques, the intention on part of the investigators is to extract information and not to inflict any pain or suffering. Furthermore, it has been contended that the actual administration of either the narcoanalysis technique, polygraph examination or the BEAP test does not involve a condemnable degree of ‘physical pain or suffering’. Even though some physical force may be used or threats may be given to compel a person to undergo the tests, it was argued that the administration of these tests ordinarily does not result in physical injuries.¹⁷⁷ However, it is quite conceivable that the administration of any of these techniques could involve the infliction of ‘mental pain or suffering’ and the contents of their results could expose the subject to physical abuse.¹⁷⁸ The same concerns were iterated and outlined by the National Human Rights Commission.¹⁷⁹ The relevant extract has been reproduced thus “...The lie detector test is much too invasive to admit of the argument that the authority for Lie Detector tests comes from the general power to interrogate and answer questions or make statements. (Ss. 160-167 CrPC) However, in India we must proceed on the assumption of constitutional invasiveness and evidentiary impermissiveness to take the view that such holding of tests is a prerogative of the

¹⁷⁶ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

¹⁷⁷ Linda M. Keller, ‘Is Truth Serum Torture?’ 20 *American University International Law Review* 521-612 (2005)

¹⁷⁸ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

¹⁷⁹ Guidelines relating to administration of Polygraph test (Lie Detector test) on an accused (2000)

individual, not an empowerment of the police. In as much as this invasive test is not authorised by law, it must perforce be regarded as illegal and unconstitutional unless it is voluntarily undertaken under non-coercive circumstances. If the police action of conducting a lie detector test is not authorised by law and impermissible, the only basis on which it could be justified is, if it is volunteered.”

5.9.5. Authenticity of Forensic Psychological Tests

A common concern expressed with regard to each of these techniques was the questionable reliability of the results generated by them. In respect of the narcoanalysis technique, it was observed that there is no guarantee that the drug-induced revelations will be truthful.¹⁸⁰ Furthermore, empirical studies have shown that during the hypnotic stage, individuals are prone to suggestibility and there is a good chance that false results could lead to a finding of guilt or innocence. As far as polygraph examination is concerned, though there are some studies showing improvements in the accuracy of results with advancement in technology, there is always scope for error on account of several factors.¹⁸¹

Objections can be raised about the qualifications of the examiner, the physical conditions under which the test was conducted, the manner in which questions were framed and the possible use of ‘countermeasures’ by the test subject. A significant criticism of polygraphy is that sometimes the physiological responses triggered by feelings such as anxiety and fear could be misread as those triggered by deception. Similarly, with the P300 Waves test there are inherent limitations such as the subject having had ‘prior exposure’ to the ‘probes’ which are used as stimuli. Furthermore, this technique has not been the focus of rigorous independent studies. The questionable scientific reliability of these techniques comes into conflict with the standard of proof ‘beyond reasonable doubt’ which is an essential feature of criminal trials.

5.9.6. Role of Experts in administering Forensic Tests

A crucial factor that merits attention is the role of the experts who administer these tests. While the consideration of expert opinion testimony has become a mainstay in our criminal justice system with the advancement of fields such as forensic toxicology, questions have been raised about the credibility of experts who are involved in administering the impugned techniques. It

¹⁸⁰ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

¹⁸¹ *Ibid.*

is a widely accepted principle for evaluating the validity of any scientific technique that it should have been subjected to rigorous independent studies and peer review. This is so because the persons who are involved in the invention and development of certain techniques are perceived to have an interest in their promotion. Hence, it is quite likely that such persons may give unduly favourable responses about the reliability of the techniques in question.

5.9.7. Standards of Police Behaviour in administering Forensic Tests

A potential problem of forcible administration of Forensic techniques is that it could be the first step on a very slippery-slope as far as the standards of police behaviour are concerned.¹⁸² It was contended that the promotion of these techniques could reduce the regrettably high incidence of ‘third-degree methods’ that are being used by policemen all over the country. This is a circular line of reasoning since one form of improper behaviour is sought to be replaced by another. What this will result in is that investigators will increasingly seek reliance on the impugned techniques rather than engaging in a thorough investigation. The widespread use of ‘third-degree’ interrogation methods so as to speak is a separate problem and needs to be tackled through long-term solutions such as more emphasis on the protection of human rights during police training, providing adequate resources for investigators and stronger accountability measures when such abuses do take place.

Moreover, the claim that the use of these techniques will only be sought in cases involving heinous offences rings hollow since there will no principled basis for restricting their use once the investigators are given the discretion to do so. From the statistics presented before us as well as the charges filed against the parties in the impugned judgments, it is obvious that investigators have sought reliance on the impugned tests to expedite investigations, unmindful of the nature of offences involved. In this regard, we do not have the authority to permit the qualified use of these techniques by way of enumerating the offences which warrant their use. By itself, permitting such qualified use would amount to a law-making function which is clearly outside the judicial domain.

One of the main functions of constitutionally prescribed rights is to safeguard the interests of citizens in their interactions with the government. The Supreme Court in *Selvi case*,¹⁸³ held

¹⁸² *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

¹⁸³ *Ibid.*

that “as we are the guardians of these rights, we will be failing in our duty if we permit any citizen to be forcibly subjected to the tests in question.” However, the Court conceded that this decision could benefit some of the parties such as hardened criminals who have no regard for societal values. It must be borne in mind that in constitutional adjudication, the Court’s concerns are not confined to the facts at hand but extend to the implications for the whole population as well as the future generations.

The Court iterated that, sometimes there are apprehensions about judges imposing their personal sensibilities through broadly worded terms such as ‘substantive due process’, but in this case, the inquiry has been based on a faithful understanding of principles entrenched in the Constitution.¹⁸⁴ In this context it would be useful to refer to some observations made by the Supreme Court of Israel in *Public Committee Against Torture in Israel v. State of Israel*,¹⁸⁵ where it was held that the use of physical means (such as shaking the suspect, sleep-deprivation and enforcing uncomfortable positions for prolonged periods) during interrogation of terrorism suspects was illegal.

Among other questions raised in that case, it was also held that the ‘necessity’ defence could be used only as a post factum justification for past conduct and that it could not be the basis of a blanket pre-emptive permission for coercive interrogation practices in the future. Ruling against such methods, Aharon Barak, J. held “...This is the destiny of democracy, as not all means are acceptable to it, and not all practices employed by its enemies are open before it. Although a democracy must often fight with one hand tied behind its back, it nonetheless has the upper hand. Preserving the ‘Rule of Law’ and recognition of an individual’s liberty constitutes an important component in its understanding of security.”

5.10. Legal position of Forensic Psychological Tests vis-à-vis Right against Self-Incrimination in India

In *Selvi Judgment*,¹⁸⁶ which expounds the authoritative legal position as regards Forensic Psychological Tests vis-à-vis Right against Self-Incrimination in India, it was held by the Hon’ble Supreme Court that the compulsory administration of the impugned forensic psychological techniques violates the ‘right against self- incrimination’. This is because the

¹⁸⁴ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

¹⁸⁵ *Public Committee Against Torture in Israel v. State of Israel*, H.C. 5100 / 94 (1999)

¹⁸⁶ *Smt. Selvi & Ors. v. State of Karnataka*, AIR 2010 SC 1974

underlying rationale of right against self-incrimination is to ensure '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 categorized as material evidence.

The Court further opined 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, 53A 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.

Furthermore, a compulsory administration of any of the forensic psychological techniques is an unjustified intrusion into the mental privacy of an individual. It would also amount to 'cruel, inhuman or degrading treatment' in the pretext of evolving international human rights norms. Moreover, 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'. In light of these conclusions, it can be understood 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, a room must be left 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.

The Court referred to the Guidelines published by The National Human Rights Commission.¹⁸⁷ It held that these guidelines should be strictly adhered to and similar safeguards should be adopted for conducting the ‘Narcoanalysis 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.

¹⁸⁷ Guidelines for the Administration of Polygraph Test (Lie Detector Test) on an Accused, 2000

CHAPTER 6

CONCLUSION AND SUGGESTIONS

The immediate aim of criminal justice system is to reduce crime rate in the society by ensuring maximum detection of crimes and prosecution of offenders so as to meet the ends of justice. In today's world, where crime have increased in numbers and in varied forms and are committed even without leaving trace evidence, this could be achieved only by scientific orientation of criminal justice system. Thus, assimilation of forensic science techniques, including Forensic Psychological Tests in the criminal justice system have become inevitable. However, these tests are criticised for their adverse impact on human rights, especially that of the accused. Though several human rights of the accused may be affected by the assimilation of these tests, the right against self-incrimination and right to fair trial of the accused are most pertinently disturbed owing to their application.

It may be stated that, the emergence of Forensic Psychological Tests was actually proposed against the cruel and inhuman modes of punishments and harsh treatments in criminal justice system associated with the demonological thinking that was prevalent prior to Seventeenth Century. It is seen as a plausible way to fulfil the existing deficiencies of criminal justice system even today. Though various tests are designated under a single-head as 'Forensic Psychological Tests', the degree of physical invasiveness varies with the nature of the tests. Since mid-Nineteen Nineties, most of these tests are extensively used in different countries in various settings, civil and criminal.

The contours of right against self-incrimination have been both strengthened and weakened in India in recent cases. In cases like *Smt. Selvi v. State of Karnataka*,¹⁸⁸ *Justice K. S. Puttaswamy (Retd.) v. Union of India*,¹⁸⁹ the Supreme Court strengthened the contours of Right against self-incrimination. In Selvi judgment, the Supreme Court outrightly held that the information derived from forensic psychological tests would amount to testimonial compulsion if the accused is 'compelled' to undergo such test. As such, it would hit Article 20(3) of the Constitution of India and would not be admissible in Courts. In K. S. Puttaswamy judgment, the Court re-iterated the principles held in Selvi judgment and strengthened the realms of right

¹⁸⁸ *Smt. Selvi v. State of Karnataka*, AIR 2010 SC 1974

¹⁸⁹ *Justice K. S. Puttaswamy (Retd.) v. Union of India*, (2017) 10 SCC 1

against self-incrimination by linking it to a person's right to privacy, which was later held to be implicit aspect of Article 21 of the Constitution. But in a recent judgment, the Supreme Court stated that the accused can be directed to give voice-samples to aid the process of investigation and such an exercise would not amount testimonial compulsion.¹⁹⁰ This rekindled the debate on the necessity of arming investigation authorities with scientific tools and tests.

The primary reason that the Governments and Courts, alike, are apprehensive of the inculcation of scientific tests in the investigative machinery is the possible misuse of powers by the investigating authorities itself. Moreover, the tests are yet to achieve their own merit and sanctity as regards their authenticity. This warrants for more research and validation studies as to forensic psychological tests and psychiatric evaluation. Government funding has begun in countries like USA in neuroscience projects. The analysis of foreign position has revealed that both common law and civil law countries admit the test results if voluntarily administered, however with sporadic reservations. It is also found that most of the countries are parties to most of the international conventions and hence bound by the human rights standards provided therein which is applicable with respect to their criminal justice process. Thus, it may be stated that, minimum guarantees as to fair trial is guaranteed in the criminal law in all the countries in the world, irrespective of whether they follow accusatorial or inquisitorial system.

Moreover, when the common law position is analysed, it is found that, one of the main issues raised against admissibility of forensic psychological tests is its violation of right against self-incrimination. However, the recent trend of judiciary is to carve out limitations to this right as well. Regarding interpretation of testimony also, the US courts and scholars have adopted different approaches. In Canada, UK and Australia Forensic Psychological Tests are not disallowed on the ground of infringement of right against self-incrimination but on reliability and admissibility grounds. Thus, it may be stated that theoretical basis on which court made its decision in *Selvi*, requires reconsideration, but only when the tests attain a threshold of (i) Minimum invasiveness (ii) Greater authenticity (iii) Strict adherence of procedure.

¹⁹⁰ *Ritesh Sinha v. State of Uttar Pradesh*, AIR 2019 SC 3592

It is important that society must avail the benefit of scientific progress using psychological knowledge, if these developments help in criminal justice administration. More and more research has been emerging in the area of forensic psychology and researchers are developing more reliable and non-invasive procedures for the proper detection and investigation of crime. The right to avail the benefit of scientific progress is also a human right. Hence, it is not proper on the part of courts to outrightly shut the doors towards scientific investigation, which would be beneficial not only to the victim and public at large, but even to the accused. It may be stated that important safeguards like presence of counsel etc., must be ensured while conducting the tests.

Evaluation of admission and exclusion of evidence plays an important part in determining how balance has to be struck between the admissibility of evidence and protecting the rights of the accused. It is found that the legal system of all the common law countries has their own admissibility criteria to evaluate the evidentiary value of any scientific evidence which is applicable in the case of Forensic Psychological evidence also. In India, corroboration is the only requirement for admissibility of any scientific evidence including Forensic Psychological evidence. The object of these admissibility standards is to exclude Forensic evidence unless it rests on scientifically valid principles and methodology and thus protect the rights of innocent accused.

The analysis of case laws regarding admissibility of all the Forensic Psychological Tests in all the countries reveal that, the case laws mostly pertain to Polygraph evidence. Judicial scepticism regarding all these tests in all the countries is mainly on the grounds of reliability and violation of exclusionary rules. In USA, regarding Polygraph admissibility, courts in state jurisdictions adopt three divergent views, (i) *per se* inadmissibility, (ii) admissibility by stipulation and (iii) *per se* admissibility. Narco Analysis is generally held inadmissible. Though evidence based on Functional Magnetic Resonance Imaging Test and Brain Fingerprinting are presently held as inadmissible, the courts themselves have expressed the possibility of their allowance in future. The evidentiary value of the tests is analysed in the light of *Daubert*¹⁹¹ criterion and amended Federal Rules of Evidence. In India, the test results are admitted in favour of prosecution for the limited purpose in accordance with Section 27 of The Indian Evidence Act.

¹⁹¹ *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993).

Exclusionary rules were developed against the background of a criminal justice system which was radically different from what we have in this modern era. In those days accused had no right to fair trial. It was developed at a time in which there was no professional police force, prosecution, no right to bail or right to counsel or right to defence or right to appeal and capital punishment was mandatory rule for several offences. Hence, in those times exclusionary rules were inevitable to protect the rights of the accused. However, in this modern era, criminal justice administration is governed by human rights principles, and police, prosecution and defense lawyering has become scientific and professionalized. Hence *per se* exclusion of Forensic Psychological evidence which may be relevant to the determination of guilt or innocence may do more injustice than rendering justice.

At this juncture, it is pertinent to note that Forensic Psychological Tests are not *per se* banned in India. Analysis of the tests in the light of The International Covenant on Civil and Political Rights, 1966 and The Convention Against Torture and Other Cruel, Inhuman and Degrading Treatment and Punishment, 1984, revealed that the investigative use of the tests are not *per se* violative of right against torture or other ill treatment. It is also found that the concept of mental privacy is only an aspect of procedural protection and hence do not have substantive protection. Therefore, it could also be subjected to restrictions on the grounds of public interest. Hence, it may be stated that admissibility of the results obtained from non-invasive Forensic Psychological Tests, if safeguards are strictly followed must be decided on case-by-case basis.

It is true that evidence based on Forensic Psychological Tests suffer from many disparities. But that is not confined to these tests alone. When we analyze scientific evidence based on forensic science it could be seen that, the forensic science disciplines exhibit a wide variety with regard to methodologies, techniques used, reliability, error rate and general acceptability. Some disciplines are laboratory based,¹⁹² It is also to be noted that just because these tests are severely criticized, it does not mean that they should be banned or discarded.¹⁹³ Even in *Selvi*,

¹⁹² Toxicology, Drug Analysis, DNA Analysis, etc.

¹⁹³ Jerome H. Skolnick., "Scientific Theory and Scientific Evidence: An Analysis of Lie-Detection," Vol. 70(5), The Yale Law Journal, 1961, pp.694-728 at p.721.

the Supreme Court did not hold that the tests are scientifically invalid. In fact, when considering ordinary interpretative procedures, these tests are less subjective in nature.¹⁹⁴

It is stated that the use of these tests would reduce police using torture and third degrees methods. These tests are also better than the deceptive practices presently employed by the police in getting confessions. It is even stated that use of more scientific techniques by the police would result in increased self-respect and a heightened feeling of professionalism in police department which in fact would result in reluctance to resort to violence which is considered as “characteristic of lower social class.” Apart from that, it is also stated that these tests also have as one of its important objectives to exonerate the innocent.

Moreover, the trend of different countries in the world, is also neither *per se* ban nor *per se* admissibility of these tests. The study has revealed that Forensic Psychological Tests must earn its admission in court. But it is also important to note that most of the tests are in the stage of infancy. At the same time, these tests are also not shown as totally invalid and untrustworthy. The courts in most countries are trying to balance the principles of opinion evidence, hearsay evidence, and right of the accused and public to access to benefits of latest scientific advancements. The courts also try to balance accused’s right against self-incrimination and right to fair trial and also public’s right to have efficient investigation and prosecution of offenders.

The study has revealed that presently there exists no legislation in India, governing Forensic Psychological Tests. The regulation of forensic psychology practice in the country, is also in a dormant state. Only law governing the Forensic Psychological Tests are the guidelines in *Selvi*. But the guidelines are confined to Polygraph, BEOS and Narco Analysis Tests. It is also submitted that even *Selvi* is criticised on various legal, constitutional and ethical grounds. It is also doubtful whether provisions of The Code of Criminal Procedure dealing with investigative powers of police could be extended with respect to these tests especially in the wake of *Ritesh Sinha* decision. Hence there exists lacunae of law in this regard.

¹⁹⁴ Anushree A., “Forensic Psychology Tests in Criminal Investigation: Need for a Comprehensive Legislation,” Vol.1 (3), International Journal for Research in Law, April 2016, pp.174-193 at p.190.

The field of criminology has expanded rapidly during the last few years, and the demand for supplemental methods of detecting deception and improving the efficiency of interrogation have increased concomitantly. Narco-analysis, Brain-Mapping, Polygraph and other forensic tests for criminal interrogation is a valuable technique, which would profoundly affect both the innocent and the guilty and thereby hasten the cause of justice.

Taking into consideration the problems faced by investigation agency in interrogating non-cooperating accused, these modern scientific techniques could be extremely helpful in exhuming the truth. In *State of Bombay vs. Kathi Kalu Oghad*,¹⁹⁵ the hon'ble Supreme Court considered the meaning of compulsion in context of Article 20(3). It was held that compulsion under Indian Law is equivalent to Duress under English Law. Court gave reference of Dictionary of English Law by Earl Jowir, wherein Duress is explained as follows: "Duress is where a man is compelled to do an act by injury, beating or unlawful imprisonment (sometimes called duress in strict sense) or by the threat of being killed, suffering some grievous bodily harm, or being unlawfully imprisoned (sometimes called menace, or duress per mines). Duress also includes threatening, beating or imprisonment of the wife, parent or child of a person".

It was further observed by the court that the compulsion under Article 20(3) refers to physical act and state of mind does not come under its purview, so these tests do not violate provisions of the constitution. Moreover, the courts should not forget Section 27 of Indian Evidence Act, where in it is clearly mentioned that any discovery made by investigating authorities in pursuance of accused's statement is admission irrespective of the fact how it was extracted. This section would normatively include in its amplitude all the discoveries made by these techniques without violation of any provision of Law.

When criminals are using science in the commissions of crime, there is no reason to restrict police or investigation authorities in taking aid of scientific techniques. It is not that science is altogether rejected in the courts of law, however there are some reservations when scientific tools come in conflict with the rights available to the accused. The rights available to the accused persons are treated almost divine. They are so widely interpreted that now inventions and discoveries are altogether rejected.

¹⁹⁵ *State of Bombay vs. Kathi Kalu Oghad*, AIR 1961 SC 1808

There are plenty of constitutional provisions in the world that proposes the safety of accused against custodial torture, cruel and inhuman treatment. Right to remain silent is also available in almost every constitution to the accused. Another significant right available to accused globally is right against self-incriminatory statements. When all these rights are available to accused, then obviously investigating agencies need to take recourse of new modern tools of investigations. However, problem arises when these tools are termed as barbaric and inhuman, rather these should be seen as soft alternate to the torture and cruel behaviour. In administration of justice the victim is almost forgotten.

Considering Brain-mapping and Polygraph test, in these tests no statement is made, neither oral nor written. In polygraph test, physiological changes are gauged and in brain-mapping, brain impressions are measured. Right against inhuman treatment, use of third-degree torture and custodial violence is available to the accused. But proponents argue that only with the help of these techniques, custodial crimes can be completely eradicated. So, these methods or techniques should not be abrogated but made part and parcel of investigations.

Irrespective of the gradual inclinations shown by Governments and Courts towards the various forensic tests, the existing legal position can be concluded to be pointing in favour of upholding right against self-incrimination of the accused against the use of forensic tests, as they have the potential to invade the mental privacy of a person.

An explicit reference to the Lie-Detector tests was of course made by the U.S. Supreme Court in the case of *Schmerber v. California*,¹⁹⁶ wherein it was observed that: “To compel a person to submit to testing in which an effort will be made to determine his guilt or innocence on the basis of physiological responses, whether willed or not, is to evoke the spirit and history of the Fifth Amendment.”

Similarly, in *Smt. Selvi v. State of Karnataka*,¹⁹⁷ a full-bench of Supreme Court examined in detail involuntary administration of Narcoanalysis, Polygraph and Brain-Mapping and held that involuntary administration i.e., without the consent of the subject who is to undergo these

¹⁹⁶ *Schmerber v. California*, 384 US 757 (1966), at p. 764

¹⁹⁷ *Smt. Selvi v. State of Karnataka*, AIR 2010 SC 1974

tests, the administration of Narcoanalysis, Polygraph and Brain mapping is unlawful, unconstitutional, and therefore, inadmissible in the court of Law.

Thus, it may be stated that the forensic tests are have to meet the requisite threshold of the following factors: (i) Minimum invasiveness (ii) Greater authenticity (iii) Strict adherence to procedure (iv) Proper safeguards for the accused while administering the tests. The Courts have been less reluctant in narrowing the right against self-incrimination in matters of physical evidence. After the Selvi judgment and Privacy Judgment, it can be contended that the contours of right against self-incrimination have been reaffirmed on new grounds.

The scientific techniques are not new to India. Investigating agencies have been using these tools since years, however, the statutory law is silent on the use and admissibility of scientific evidence. This is the reason that judgment law is available both in the favour of use of scientific techniques as well as against the use of scientific tools in investigation, prior to the Selvi judgment which has also, not outrightly banned the application of these tests, but has substantially curtailed the admissibility of the same. However, the judgment has not *per se*, shut doors for the inculcation of scientific tests in future. In the light of this, it is pertinent to mention that the Malimath Committee, Menon Committee and another two-member committee in 2010, have recommended for the improvement of forensics in the country.

In conclusion, the Forensic Psychological Tests or Deception Detection Tests have faced a number of criticisms and it is still unclear as to what degree, lie detectors and brain mapping can be used to reveal concealed knowledge in applied real-world settings. The Supreme Court judgment on involuntary Forensic Psychological tests is that it has no place in the judicial process. On the contrary, it opined that application of the same will disrupt proceedings, cause delays, and lead to numerous complications which will result in no greater degree of certainty in the process than that which already exists. Contemporary forensic tests need to undergo rigorous research in normative and pathological populations. Premature application of these technologies outside research settings should be resisted. The vulnerability of the techniques to countermeasures also needs to be explored. It is also important to know the sensitivity and specificity of these tests. There should be standard operating guidelines for conducting Forensic tests. The Supreme Court judgment on Forensic Psychological Tests is admirable from the scientific, human rights, ethical, legal and constitutional perspectives.

To remove this repugnancy, some suggestions are respectfully submitted by the research as follows:

1. A clear and comprehensive statutory framework must address the definition, usage, application, relevancy and admissibility with respect to prevalent forensic tests such as polygraph, brain-mapping, narco-analysis, etc. As of today, the Selvi guidelines based on NHRC guidelines are the only legal basis for determining the locus standi of the tests, leaving a substantial lacuna in the field of scientific tests, its usage and inculcation in the criminal justice system.
2. Government and Institutional funding to foster the development of scientific tools for investigation is a need of the hour. This is to keep pace with the growth in complex and technical crimes. Forensic tests have gained prominence, but are yet to establish their legitimacy and genuineness in a manner, that they could be harmoniously read into the accused's right against self-incrimination, right to privacy and his right to fair trial. Concrete steps should be taken to bring forensic science in the forefront of Criminal justice administration.
3. The government should formulate a policy wherein the investigating authorities be given training in such a way that they can make use of modern and scientific tools of investigation in a more skilful manner. Questions are raised regarding the science behind narco-analysis, polygraph and brain mapping and their usage. If the investigating authorities are given specialized training to utilize these tests, it would help in extraction of truth in a more efficient and civilised manner.
4. The explanation attached with the Section 53, Section 53A and Section 54 could be given wider possible interpretation, once the sanctity and efficacy of a particular scientific test is established. Techniques such as polygraph, brain mapping or narco-analysis may be included in the phrase 'modern and scientific techniques' in light of the rule of "*ejusdem generis*" in future.

5. The utilization of scientific tools for investigation such as polygraph, brain mapping and narco-analysis in interrogation process could help in curbing the problem of custodial torture, violence and deaths to a significant extent. The foremost right of every detainee is the preservation of the basic and natural human right, which can only be guaranteed in violence-free environment. A person should always be treated with respect and his dignity should be maintained at every stage. These techniques are yet to achieve unanimous consonance with the preservation of human rights, but they are softer alternatives to prevalent modes of interrogation such as cruelty, torture and deception.
6. There are certain guidelines laid down by the National Human Rights Commission however, they do not provide comprehensive guidance. These guidelines are silent on various important issues. Moreover, they are primarily focused on the administration of polygraph test. No regulation or assistance is available in the country regarding the procedure to be followed in the administration of narco-analysis and brain mapping tests although there are instances where these tests have been conducted in a number of cases.
7. There should be a Centralised body in India for controlling the procedural standard of tests, as well as proper training of examiners. A network of standardized Forensic Laboratories should be laid down in the country which should be well equipped and must function with proper documentation authorized by the legislation.
8. Adequate provisions should be made to make a National DNA Databank, on the basis of CODES maintained by Federal Bureau Investigation in USA. To start with, the DNA sample of prisoners should be collected, in the same manner as their finger impressions are taken and records maintained by the Government after their conviction under Identification of Prisoner's Act, 1920.
9. With the maturity of certain forensic tests in a manner that its applicability in criminal justice system becomes humanely possible and sufficiently reliable, the non-invasive forensic tests may then be conducted with respect to offences punishable with more than 2 years imprisonment. Invasive tests may be conducted only with respect to

offences punishable with more than 10 years imprisonment or life imprisonment or death penalty or offenses affecting women and children. Consent of the subject need not be insisted in the case of administration of non-invasive tests.

10. To ensure more reliability and transparency, it must be ensured that lawyer must be present while the tests are conducted. It is also suggested that if the subject is unable to appoint a lawyer, a lawyer must be appointed at the expense of the state.
11. Forensic psychology practice must be regulated. In no manner, the rights of the accused can be compromised or undermined for a pre-mature implementation of these tests. Licensing procedure must be made mandatory. There must be a regulatory body for regulating practice of forensic psychologist which prescribes ethical standards for them and enforce them in the event of their violations.
12. Since the right against self-incrimination is one of the ingredients of the fair trial, it is, therefore humbly suggested that the police department must be sensitized regarding human right and be given instructions regarding right against self-incrimination of the accused person.
13. No Narco-analysis, Polygraphy and BEAP should be administered without the consent of the accused yet, given that the tests still have questionable efficacy and could be susceptible to unprecedented misuse by the investigating authorities. However, if the accused voluntary seeks to undergo one of these tests, then it is suggested that the consent be recorded before a Judicial Magistrate. During the hearing before the Magistrate, the accused should be duly represented by a lawyer. At the hearing, the person should also be told in clear terms that the statement that is made shall not be a 'confessional' statement to the Magistrate but will have the status of a statement made to the police. The Magistrate shall consider all factors relating to the detention including the period of detention and the nature of interrogation. If the accused volunteers for the test, he should be given access to a lawyer. The police and the lawyer should explain the physical, emotional and legal implication of such a test to him.

14. To protect the accused's right against self-incrimination and inculcate the forensic tests, and to ensure a healthy balance between two conflicting interests, it is suggested that the accused shall only be subjected to these tests once a chain of proof is established by the prosecution, which reasonably hints towards the accused's involvement in the commission of crime. One must bear in mind that before using such tests, it must be proved that all the links in the chain are complete and do not suffer from any infirmity, subject to fulfilment of the following essentials: Firstly, that various links in the chain of evidence led by the prosecution have been satisfactorily proved; and secondly, that the said circumstance point to the guilt of the accused with reasonable definiteness.

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