

**ASPECT OF FORENSIC SCIENCE IN CRIMINAL
INVESTIGATION: ADMISSIBILITY IN THE INDIAN LEGAL
SYSTEM**

A DISSERTATION TO BE SUBMITTED IN PARTIAL FULFILMENT
OF THE REQUIREMENT FOR
THE AWARD OF DEGREE OF MASTER OF LAWS

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SESSION: 2022-23

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I wish her success in life.

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LIST OF ABBREVIATIONS

A.D.	Anno Domini
AIR	All India Reporter
B.C.	Before Christ
CBI	Central Bureau of Investigation
CIA	Central Investigation Agency
C.J.	Chief Justice
CQ	Control Question
CrPC	Criminal Procedure Code
DLC	Direct lie-control
DNA	Deoxyribonucleic Acid
FBI	Federal Bureau of Investigation
FIR	First Information Report
GABA	Gama Amino Butyric Acid
G.S.R	Galvanic Skin Response
MLR	Medico-Legal Reports
PMR	Post Mortem Reports
R-I	Relevant – irrelevant
UK	United Kingdom
U.S.A	United States Of America

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- ✚ Dinesh Dalmia v. State 2006 CriLJ 2401
- ✚ D.K. Basu v. Territory of West Bengal (1997) 1 SCC 416
- ✚ Gajendra Singh v. State of Rajasthan (1998) 8 SCC 612
- ✚ Harrington v. State of IOWA NO-96-132
- ✚ M.P. Sharma v. Satish Chandra 1954 AIR 300, 1954 SCR 1077
- ✚ Nandini Sathpathy v. P.L. Dhani 1978 AIR 1025, 1978 SCR (3) 608
- ✚ Patangi Balarama Venkata Ganesh v. State of Andhra Pradesh 2003 (1) ALD Cri 789, 2003 (2) ALT Cri 9, 2003 CriLJ 4508
- ✚ People's Union for Civil Liberties v. Union of India AIR 1997 SC 568, JT 1997 (1) SC 288, 1996 (9) SCALE 318, (1997) 1 SCC 301, 1996 Supp 10 SCR 321, 1997 (1) UJ 187 SC
- ✚ Raja Narayanlal Bansilal v. Maneck Phiroz 1961 AIR 29, 1961 SCR (1) 417
- ✚ Ramchandra Reddy v. State of Maharashtra, 5 March, 2004

- ✚ Rojo George v. Deputy Superintendent of Police 2006 (2) KLT 197
- ✚ Sanjeev Nanda v. State of NCT of Delhi 2007 CriLJ 3786
- ✚ Santokben Sharmanbhai Jadeja v. State of Gujarat 2008 CriLJ 68, (2008) 1 GLR 497, 2008 (2) KLT 398
- ✚ Selvi v. State of Karnataka (2010) 7 SCC 263,
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- ✚ Thogorani v. State of Orissa 2004 CriLJ 4003
- ✚ Townsend v. Sain U.S. 293 (1963)
- ✚ United States v. Swanson No. CR 06-0692 PJH.” *U.S. v. Swanson*, No. CR 06-0692 PJH, (N.D. Cal. Nov. 16, 2007)
- ✚ Vishal Motising Vasva v. State of Guajrat 2004 CriLJ 3086

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Crime in some form or the other has existed since the beginning of human race. As Science and technology developed, criminal and the concept of crime has undergone a tremendous change. Due to this, criminals used their intelligence to use technology to their benefit and the police investigators find it difficult to depend on their conventional style of investigation, interrogation, and surveillance to detect crime. The traditional way of detecting crime by using torturous methods is no longer applicable in the current scenario. Under this circumstance, the police investigators also depend on science to carry out their investigations. This is where Forensic Science has come to their rescue and acts as a powerful weapon in the hands of judiciary and law enforcement departments.¹

‘Forensic’ is a word derived from the Latin term ‘*Forensis*’ meaning belonging to court of Justice or public discussion and debate.² ‘Forensic Science’, means the science relating to or denoting the application of scientific methods and techniques to the investigation of crime. Forensic Science is a scientific discipline that deals with the recognition, individualization, identification, and evaluation of physical evidence by applying the procedure of natural sciences used for the purpose of administration of criminal justice.

Forensic science includes all branches of science like medicine, surgery, biology, photography, physics and Chemistry. However, in later years it has developed its own branches like, DNA Fingerprinting, Entomology, Anthropology, Ballistics, Hairs and

¹B.S. Nabar, *Forensic Science in Crime Investigation*, 15(Asia Law House, Delhi 3 edition 2013)

²*Ibid.*

Fibers, Fingerprint Odontology, Pathology, Questioned documents and Toxicology. Currently, Forensic Engineering, Forensic Neuropathology and Forensic Accounting and Fraud Auditing are the other branches added to it.³

This research focuses on Role of Forensic Science in the homicidal cases and the procedure of investigation and studies DNA, Lie-Detection Tests, Fingerprinting and Fingerprints and puts an effort to identify their evolution with time along with their judicial aspects. The first type of lie detection test is Narco-analysis test where drug is administered through the veins resulting in the subject being hypnotized. At this stage the subject is more likely to reveal needed information which is favorable for the investigators. Sodium pentothal, a drug used for general anesthesia during surgical process is used for this test. It is utilized in the field of psychiatry and enables diagnosis of mental disorders.⁴

Secondly, Polygraph is another lie detection test which is an interaction between the mind and body. In this method an individual is cross-examined by an expert with the help of sensors of a polygraph machine which is attached to the body.⁵ Any changes in the pulse rate, respiration rate, blood pressure, and electrical resistance at the skin denotes conscious effort made by the subject to hold back information.

Brain Mapping is the third type of lie detection test, in which the test sensors are attached to the head of the person. Later on, some pictures are shown or is made to hear some sounds through the connected computer. Any kind of electrical activity or response shown is observed by the sensors and registers P300 waves. Such response happens when

³Lovely Das Gupta, "Forensic Science and Crime – A Potent Weapon in Criminal Justice Administration", *Cr.L.J.*, Feb. 2003, p. 38.

⁴*Selvi v. State of Karnataka*, AIR 2010 SC 1974 (1994).

⁵Rattan Singh, "Narcoanalysis: A Volcano in Criminal Investigation System", *Cr.L.J.*, June 2010, p. 171.

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the person is connected with the picture shown or sound heard. This clearly shows that the individual is related in some way or the other with the incident.⁶

DNA Fingerprinting is the fourth type of test which is the biological blueprint of life. In our country this method is considered to be a vital method in the field of forensic science. This is a more comprehensive scientific examination than any other method or branch of forensic science. DNA Fingerprinting can be used to detect any type of crime like murders, hit and run cases, assaults, dacoities, encounter, rape and other body offences against anybody. This can be done with a variety of materials like hair roots, saliva, blood, semen, etc. The criminal unconsciously leaves any of these materials at the spot. Each and every living cell of our body has a DNA which helps to trace the person involved in the crime.

Fingerprint is another method used to identify the criminal and is considered to be the first innovative method used to investigate crime. This is considered to be the most effective means in today's scenario. It involves processes which is very effective in identification of the culprit involved.

1.1.1 ARTICLE 20 OF CONSTITUTION

As per Article 20(3) of the Constitution and in other statutory provisions Forensic Science Tests are often censured to be self-implication given under the code of criminal procedure, 1973 and Indian Evidence Act, 1872.

Article 20(3) of the Constitution of India secures right against self-incrimination to the accused person by providing that, "No person accused of an offence shall be compelled to be a witness against himself." The rule embedded in this Article consists of the following components-

(a) a right conferred to an individual who is accused of an offence';

⁶GunjanAgrahari, "Narco analysis, P300 Test, Its Objective and Evidentiary Evaluation", *Cr.L.J.*, July 2007, p. 171.

- (b) a protection against a person compelled to be a witness;
- (c) a protection to be guaranteed against a person giving evidence against himself.

Constitution has implemented this ban in order to protect the convict from being forced to admit or deny facts related to them. This fundamental principle of English Criminal Jurisprudence is found to be linked with the provisions of Criminal Procedure Code, 1973 and in Indian Evidence Act, 1872.

1.1.2 CRIMINAL PROCEDURE CODE AND INDIAN EVIDENCE ACT

In Criminal Procedure Code, 1973, it is provided under Section 53 that “examination of an accused to be conducted by a doctor when demanded by a police officer, Section 53A – examination of a person accused of rape by medical practitioner, section 91 – Summons to produce documents or other things, section 161 – Examination of witness by police, section 162 – Statement to police not to be signed; use of statement in evidence, section 313 – Power to examine the accused, section 315 – Accused person to be a competent witness. The relevant provisions in this regard under Indian Evidence Act, 1972 are to be found in Section 24 – deals with the confession caused by threat or inducement when insignificant in criminal trials, Section 25 deals with confession made to police officer not to be proved, Section 26 – Confession made in police custody not to be proved against the accused. Section 27 confers how much of information seized from the accused may be proved.

The Supreme Court in its landmark verdict case of *Nandini Sathpathy v. P.L. Dhani* clarified the scope of Article 20(3) and the provisions of the Criminal Procedure Code, 1973.⁷ According to this case the Supreme Court states that, “Section 161 of CrPC provide power to the police to probe the accused amid investigation. The prohibitive vow of Article 20(3) traces back to the stage of police investigation though not commencing within court.

⁷AIR 1978 SC 1025.

The ban imposed on self incrimination and the right to silence at the time of investigation or trial in a way protects the accused in regard to offences. This helps him to deter from voluntary disclosure of criminal related matters. It is also said that testimonies obtained by any means, like by bodily injuries, psychic torture, environmental coercion, atmospheric compression, tiring interrogative prolixity, over bearing and intimidatory methods should be accepted as evidence. As per this, denying or answering willingly cannot be regarded as necessity under Article 20(3). The argument by prosecution may lead to legal strain during exercise of a constitutional right along with some calculated risk. On the other hand, as per Article 20(3) if any mental or physical cruelty whether direct or indirect but sufficiently substantial is applied by any police officer to derive information from an accused is regarded as ‘compelled testimony’.”⁸

Several cases such as *People’s Union for Civil Liberties v. Union of India* have alleged the validity of various lie detection tests in India before the Supreme Court and in various High Courts.⁹*Ramchandra Reddy v. State of Maharashtra*,¹⁰*Rojo George v. Deputy Superintendent of Police*,¹¹*Santokben Sharmanbhai Jadeja v. State of Gujarat*,¹²*Dinesh Dalmia v. State*.¹³ In judgement of *Selvi v. State of Karnataka*,¹⁴ SC illustrated that the forced administration of impugned approach contravenes the right against self-impeachment. The hidden rationale of this right is to ensure the reliability and willingness of the statements admitted as evidence. The Supreme court has sanctioned the ambit of Article 20(3) extending to the investigating stage of any criminal offence and when read with section 161(2) of CrPC, 1973

⁸*Ibid.* para 53.

⁹AIR 1997 SC 568.

¹⁰AIR 1992 SC 1689.

¹¹(2006) KLT 197.

¹²2007 Cr.L.J. 4466 (Guj.).

¹³(2006) Cr.L.J. 2401 (Mad.).

¹⁴AIR 2010 SC 1974 (2060).

it grants protection to the accused person, suspects and witnesses who are inspected during an inquiry. The test results would be discarded if they have been obtained via the use of force. Article 20(3) safeguards an individual whether he choose to express or remain silent, irrespective of whether the testimony proves to be inculpatory or exculpatory. The outcome of the impugned test bears a 'testimonial' nature which do not fall under material evidence. The personal liberty is infringed if a person undergoes any of the impugned techniques forcefully without his will. Violation occurs irrespective of whether the techniques are implemented forcibly during the course of examination or different purpose. Any paramount interpretation is not feasible in the light of the rule of 'ejusdem generis' and the considerations which govern the interpretation of statutes in relation to scientific advancements. Mandatorily administering any of these techniques is a biased intrusion into an individual's mental privacy. According to the International Human Rights norm, it amounts to cruel, inhuman or degrading treatment of a human being.

In the case of *Selvi v. State of Karnataka*¹⁵ while discussing the validity of DNA Fingerprinting, Supreme Court observed that the resemblance of DNA samples acts as a vital linkage to suspect criminal behavior. Under Article 20(3), use of material samples like fingerprints for the purpose of comparison and identification does not amount to a testimonial act.

¹⁵AIR 2010 SC 1974 (1978).

Hence, sampling and preserving of DNA samples which act as physical evidence has no constitutional consequences in the arena of Indian context.

In this study the researcher puts an effort to bring out the effectiveness and risks involved in the forensic science tests and also the conflict that exists between the constitutional guarantee given under Article 20(3).

1. 2 STATEMENTS OF PROBLEM

Forensic science is that piece without which the puzzle of a criminal investigation incomplete. Without the application of forensic science, criminals can never be convicted unless an eyewitness is present. While detectives and law enforcement agencies are involved in the collection of evidence, be it physical or digital, it is forensic science that deals with the analysis of those evidence in order to establish facts admissible in the court of law. Thus in a world devoid of forensic science, murderers, thieves, drug traffickers and rapists would be is roaming scot-free. The duties and responsibilities of a forensic scientist in a criminal investigation is crucial as it involves the careful examination of an evidence while ensuring that it is not tampered with. A diverse pool of forensic scientists and forensic tools go into the investigation of a criminal act. Thus in this paper we will study how it aids in investigation process and how to connect the evidences with the culprit so to reach out to the actual person who commit crime, so that no innocent gets punished. As a saying is famously said, ” hundreds of criminal scan go unpunished but any innocent must not be punished”.

1.3 NEED FOR PRESENT RESEARCH

Whether the case of prosecution is Homicidal or Non-Homicidal it can be determined through the deep analysis and proper examination of forensic evidence. Forensic science helps to determine what actually happened, how the crime has been committed, which procedure is adapted by the offender, by which weapon murder is caused, at what time

the crime is committed, these questions are essential part of investigation process and they could be answered after performing some crucial forensic tests, and these tests cannot be conducted by any person, they must be performed by experts in forensic science as these tests involve technicalities. Some of these tests are mentioned below:

1. Fingerprint Analysis¹⁶ – Fingerprints are unique patterns of lines that consist of ridges and loops which remains the same for rest of our lives. They are unique, permanent, universal, distinguishable and inimitable that are frequently available in crime scene and all these distinctive features makes it crucial as evidence. The items that we touch in our daily lives are often left with impressions of our fingerprints since our body produces oil that acts like invisible ink. These virtually invisible images are generally called latent fingerprints and they can be easily made visible through the application of colored powder used for fingerprinting. Nowadays fingerprints can be identified electronically by using a biometric scanning process known as automated fingerprint identification system. The positive fingerprint matches conducted by an expert witness as a proof of identity are frequently accepted by the courts beyond reasonable doubt.
2. DNA Analysis¹⁷ – DNA profiling is the most potent and versatile mode found till date and holds a special position in criminal investigation and trial. DNA or deoxyribonucleic acid is a molecule that holds the unique genetic information and hereditary characteristics from which the living organisms are originated. DNA profile just like a fingerprint is unique (individualistic). There are two types of DNA, nuclear and mitochondrial DNA though both are used for the identification of individuals but nuclear DNA is widely used for better specific identifications.¹⁸ Through this

¹⁶ <http://www.forensicsciencesimplified.org/prints/how.html>

¹⁷J.B. Holton, L. Tyfield, in *Scientific Foundations of Biochemistry in Clinical Practice* (Second Edition), 1994

¹⁸O. WHITE, T. DUNNING, in *Automated DNA Sequencing and Analysis*, 1994

analysis the due materials from the suspected source are compared to ascertain the identity or non-identity of the common source. DNA is very eminent tools for forensic investigation as even the little amount of genetic material can yield enough data for the purpose of comparison.

3. Hair and Fiber Analysis¹⁹ – Human beings constantly sheds materials from their bodies and clothing like hairs or fibers that are adhered to our apparels via carpet, furniture or through such other things. At the crime scene samples of hair are taken and then compared with hair of suspect to establish a similarity within a limited degree of certainty. If the hair still has root tissue on it then there is more possibility for positive identification using DNA analysis. With the help of microscopic examination, the size, color, type of hair and fiber samples can be easily determined to conduct comparisons.
4. Serological Analysis²⁰ – Serology is the scientific study of serums such as blood and other body fluids like saliva, semen, urine, sweat, tears including other liquid secretions. Among all the body fluids blood is most important fluid in crime detection. Blood is about 7% of body weight and has solid and liquid constituents. The liquid constituent is plasma and solid constituent includes red blood cells, white cells and platelets. Blood spatter analysis is a new forensic specialty. The patterns of blood spatter furnish data for reconstruction of crime scene as well²¹. Today it is considered more superior to fingerprints. Body fluids are detected and identified with precision to eliminate potential suspects it is now possible to individualize a given sample of blood and to provide proof in investigation process.

¹⁹ <https://archives.fbi.gov/archives/about-us/lab/forensic-science-communications/fsc/july2000/deedric3.htm>

²⁰J. Ballantyne, in Encyclopedia of Forensic Sciences, 2000

²¹G. Sensabaugh, in Encyclopedia of Forensic and Legal Medicine (Second Edition), 2016

5. Ballistic Analysis – The understanding of Ballistic analysis is essential for investigation in the number of gun related crimes. There are techniques in ballistic science that address the unique aspects of firearm and bullets.²² There are numerous variants of firearm in each category that are studied precisely and help in gathering more information regarding the crime. In forensics, mainly small arms are encountered. Small arms are small caliber firearms which can easily handled, carried and operated by a single person. The most common firearms used in India includes handguns, pistols, revolvers, rifles, machine guns, sub-machine guns, muzzle loaders and improvised firearms.²³
6. Toxicological Analysis – Toxicology is that branch of science which deals with poisons, poison can be defined as a substance if consumed either accidentally or purposely by a living being can cause adverse effect which may even lead to death. Toxicology deals with the investigation of drugs of abuse or toxic substances. This field involves toxicology and other disciplines such as biotechnology, pharmacology, analytical- and clinical chemistry to aid the legal investigation to find out the actual cause of death.²⁴ Forensic toxicology incorporates a number of analytical techniques for detection of drugs from a variety of samples procured from the subjects. Drugs are often seen in suicidal, accidental and homicidal deaths. The detection of poisoning and its identification is an important aspect of forensic science. Homicidal poisons are often misused to kill people. Some common homicidal poisons are arsenic, aconite, opium and potassium cyanide. Toxicologists examine blood, urine, hair, oral fluids and other tissues to ascertain the presence and quantity of drugs or poison

²² <https://www.nist.gov/ballistics>

²³ <https://aboutforensics.co.uk/firearms-ballistics/>

²⁴ <https://medcraveonline.com/FRCIJ/forensic-toxicology-biological-sampling-and-use-of-different-analytical-techniques.html>

in a person body²⁵. Forensic toxicology also involves the usage of some basic principles obtained from other branches of science such as pharmacology, analytical and clinical chemistry for examining the samples and the results are presented before the court. Toxicological reports can assist investigation by showing whether the drug ingested was fatal or not and can calculate the approximate time the drug was introduced into the body.

Other tools and techniques used in forensic investigation includes – Narco-analysis Interrogation (Truth Serum Test), Psychological Detection of Deception (Lie Detector), Brain Mapping and Polygraph Test. Some of the additional forensic technologies that serve major contribution during investigation are Forensic Pathology, Forensic Anthropology, Forensic Odontology, Forensic Psychology and Forensic Engineering.

1.4 IMPORANCE OF PROBLEM

Evidence can be in any form of data or information that is presented in the court which could possibly prove the guilt or innocence of whosoever is the suspect. Forensic science played a vital role by introducing forensic evidence in the field of law. Forensic evidence is obtained by using scientific methods and later called on to be produced in the court. It acts as a proof for the offence or defense and also determines the extent of participation of any person in crime. Forensic evidence is collected, processed, analyzed, interpreted, and presented to provide information regarding the corpus delicti and revelation about the modus operandi. It can be utilized to link crimes that are presumed to be related to one another. This linking of crimes helps the police authorities to narrow the range of possible suspects and to establish patterns of crime that helps in the identification and prosecution of the accused. Some of the common Forensic Evidences are classified as

²⁵ <https://medcraveonline.com/FRCIJ/forensic-toxicology-biological-sampling-and-use-of-different-analytical-techniques.html>

physical evidence, transfer evidence, trace evidence, pattern evidence and transient evidence.

- Physical evidence is usually found at crime scenes and contributes in understand the case by perceiving these evidences. Example- fingerprints, footprints, handprints, cut marks, tool marks and such other marks.
- Transfer evidence refers to that evidence which is exchanged as a result of contact between two objects.
- Trace evidence exists in small traces or are very minute in size that usually goes unnoticed and can be transferred or exchanged between two surfaces, example- dust, soil, hair, fiber and other materials.
- Pattern evidence includes finger impressions, foot impressions, gunshot residue and other impressions that are later interpreted to discover the evidence.

Transient evidence is temporary evidence and can be easily altered or lost that must be recorded on the crime spot as soon as possible which includes odors, temperature and certain imprints that doesn't lasts for longer period of time. For the collection of these evidences and their proper care forensic science is needed, as a forensic scientist knows well how to secure blood samples which has already dried up before collection, and how to extract DNA from those samples. Thus, forensic science helps at initial level of investigation.

1.5 AIMS AND OBJECTIVES

Forensic science is one of the significant characteristics of criminal justice system. Fundamentally, it deals with exploration of scientific and physical clues gathered from the crime scene. Forensic science explains the distinctiveness (who) of the suspect who committed the crime. The evidence clearly specifies the nature (what) of the crime committed. The circumstantial evidences also speak about the time (when) of the

incident. The forensic evidence proves the location of the offence (where/crime scene). The forensic investigation also observes the method (how) of the offender. Finally, comes to conclude the reason behind the crime. The forensic investigators recreate the distinctiveness of the criminal and the victim.

During the whole process of criminal investigation, evidence is gathered from the location of crime or from a person who is an eye witness to the whole incident, examined in a crime laboratory and then the results are presented in the court. Every crime scene is exceptional in nature and each case presents its own challenges. Forensic science plays a crucial role in the criminal justice system by providing scientifically based information through the analysis of physical evidence, the identity of the culprit through personal clues like fingerprint, footprints, blood drops or hair, mobile phones or any other gadgets, vehicles and weapons. It associates with the criminal through objects left by him at the sight and with the victim or carried from the scene and the victim. On the other hand, if the clues recovered do not link the accused with the victim or the scene of occurrence, the innocence of the accused is established. Forensic science, thus, also saves the innocent. Due to the emergence of DNA technology as a modern method of forensic science, provides wonderful amount of information to the investigating officers that enable him to find the criminal purely on the basis of scientific evidence which he has left at the location of crime.

1.6 NATURE AND SCOPE OF FORENSIC SCIENCE TESTS UNDER INDIAN CRIMINAL JUSTICE SYSTEM

The law has frequent need of medical and scientific knowledge, both in pursuing its enquiries and in preparing and presenting evidences for the courts.²⁶ The importance of this form of evidence is further highlighted by the fact that it aids a judge in determining

²⁶Taylor, *Principles and Practices of Medical Jurisprudence*, 18(Churchill Livingstone, London 4th edition 1984)

the extent of liability, which may vary due to such testimony that be imposed on an offender.

As an obviate matter, expert witnesses have an advantage of a particular skill or training, since judges are not properly equipped to draw inferences from facts (as such) in certain technical matters.²⁷

The word 'Forensic' comes from Latin term 'Forensis', which means 'of or before forum'.²⁸ In Roman times, a criminal charge meant presenting a case before a group of public individuals in the forum.²⁹

Wharton Law Lexicon defines 'Forensic' as 'Science belonging to the Courts of Justice.'³⁰ According to Oxford Advanced Learner's Dictionary, 'Forensic' means, "related to or used in Court of Law". And the word 'Science' means, "Knowledge about the structure and the behavior of the natural and the physical world, based on the facts you can prove."³¹

So, 'Forensic Science' can be defined more broadly as that "scientific discipline which is directed to the recognition and evaluation of physical evidence by the application of the natural science for the purpose of administration of criminal justice."³²

Forensic Science embraces all branches of science and applies them to the purpose of law. Originally, all the techniques were borrowed from various scientific disciplines like Chemistry, Medicine, Surgery, Biology, Photography, Physics and Mathematics.³³ But in the past few years it has developed its own branches which are more or less exclusive

²⁷Shashank K. Jain, *Scientific Evidence and Opinion of Experts*, CrLJ, Sep. 2006, p. 209.

²⁸Available at <http://www.wikipedia.org/wiki/forensicscience>, (visited on 20/05/2020)

²⁹*Ibid.*

³⁰Wharton *Law Lexicon*, 437 (Arkose Press 2001)

³¹*Id.* at p. 1142.

³²B.S. Nabar, *Forensic Science in Crime Investigation*, 2008, p. 1.

³³B.R. Sharma, *Forensic Science in Criminal Investigation and Trials*, 1999, p. 3.

domains of forensic science. The science of fingerprints, anthropometry, trademarks, documents and forensic ballistics essentially belongs to forensic science alone.³⁴

1.6.1 Main Functional Elements of Forensic Science in Criminal Investigation

The prime functional components of forensic science are as follows: -

- a) Corpus delicti – The cause of death could be homicidal, suicidal, accidental or natural. Forensic Science ascertains the cause and nature of death to establish whether the death was homicidal or non-homicidal. It can also differentiate a fake incident from the real one.
- b) Modus operandi – The inspection of the corpus delicti, crime scene, evidentiary clues and the surrounding condition indicates the possible modus operandi.
- c) Criminal identity – The identity of offender could be discovered with the help of many clues that includes mobile phone records, personal details like SMS, emails, transactions which provides some relevant information about his participation in crime. The culprit may also leave some traces behind like footprints, fingerprints, hair, blood drops, saliva, semen or other body fluids on the victim's body or on weapons at the place of crime. In certain circumstances a series of chain is created all of which when linked together connects a suspect with the crime.
- d) Victim identity – Forensic Science through detailed study of personal clues helps to find out the unknown deceased person, any mutilated dead body or any skeletal remains. There are other clues as well that helps in identification of the victim body but DNA profiling and fingerprints gives major hints in this respect.
- e) Forensic Scientists – Forensic scientists assists the criminal justice system in many ways. They apply the principles of the physical or natural sciences for the analysis of distinct evidences which is capable of proving the guilt or innocence of the suspect during investigation and trials. A forensic scientist takes the lead of investigation he distinguishes the real crime scene from the fake one. The

³⁴*Ibid.*

sequence of events relating to any incident is established by him that aids in further investigation.

1.7 HYPOTHESIS

This research will confer how forensic science assist the investigating officer in conducting investigation under Indian criminal justice system by undergoing collection method, scientific techniques, in what manner to reach conclusion of investigation. To understand the motive behind usage, it's importance, application and authenticity of the end result. The study illustrates whether every forensic technique adopted is legally adhered and not against any fundamental right or privacy infringement.

1.8 RESEARCH METHODOLOGY

This research will be conducted using a doctrinal approach. In order to draw inferences and conclusions, analytical descriptive, evaluative, and insightful methods were used. A large number of books, journals, papers, documents, and other sources will be examined. In this project, all of the data sources used are secondary in nature. To raise awareness of investigators, prosecutor, attorneys, judges this research has been done. Case reports have been referred to a number of leading books on criminal practice and investigation, including All India Reporter, Supreme Court Cases, and Criminal Law Journal, Magazines, and Web Sources. Around 60% of the investigators are unaware of the concept and the factors to be considered when investigating for a crime.

1.9 SUMMARY OF CHAPTERS

Forensic science is the application of sciences such as physics, chemistry, biology, computer science and engineering to matters of law. Forensic science can help investigators understand how blood spatter patterns occur (physics), learn the composition and source of evidence such as drugs and trace materials (chemistry) or

determine the identity of an unknown suspect (biology). Forensic science plays a vital role in the criminal justice system by providing scientifically based information through the analysis of physical evidence. During an investigation, evidence is collected at a crime scene or from a person, analysed in a crime laboratory and then the results presented in court. Each crime scene is unique, and each case presents its own challenges.

The research work has been divided in five major chapters and further divided into various sub topics and sub to sub topics.

The first chapter which is named an introduction to the Role of Forensic Science in the Investigation of Homicide: A Legal Study. This chapter is an attempt to understand the overview of the research problem and understanding of the basic concepts along with origin and development of Forensic Science.

The second chapter discusses about Prime Components of Forensic Science in Criminal Investigations in which the glimpse of basic elements used in forensic investigations has been highlighted and it also tell about how both science and law are related with each other and shows to what extent science can provide assistance during criminal investigations.

The third chapter deals with the Legal Framework related to Forensic Investigation of Homicide in which Right against self-incrimination: Constitutional and Legal Perspectives has been taken into limelight. It takes into account various constitutional provisions regarding right against self-incrimination and legislative enactments with regard to the validity of forensic evidences.

The fourth chapter of this research work is dealt with Judicial Approach related to Forensic Investigation in which the Judicial Attitude as to the validity of Forensic Science tests has been emphasized on. It takes into account decisions of several High Courts and Supreme Court of India as well.

The fifth chapter attempts to conclusion and suggestion. This chapter finally concludes the study and finally provides some concrete suggestions to some of the issues already discussed in the research.

1.10 CONCLUSION

Forensic science encompasses a broad field of scientific knowledge in pursuit of crime and criminal forensic science has now established firm roots in India in the administration of criminal justice system. We, today, have a well-organized network of laboratories, fully equipped with the most modern equipment's and trained manpower to handle it. Unfortunately, in spite of all around developments in forensic science, many police officers still seem to be unaware of the developments and the facilities offered by forensic science, which modern criminals are making the full use of science to commit crimes.

In such a scenario, it is absolutely necessary for the law enforcement agencies to acquire necessary skills and scientific technique to utilize the facilities offered by the rapidly developing forensic science to meet the challenges of crime and criminals.

CHAPTER TWO

PRIME COMPONENTS OF FORENSIC SCIENCE IN CRIMINAL INVESTIGATIONS

2.1 INTRODUCTION

In criminal investigation, utilization of forensic science is need of the modern time. India is missing behind due to lack in use of logical methods in investigation of crime. The utilization of legal proof isn't sufficient in India. Indeed, even in horrifying crimes huge number of hoodlums couldn't be indicted, so a couple of trials end in a conviction with the goal that violations and crooks are expanding step by step. These successive vindications are mostly because of out of date procedure of investigation which leaves numerous escape clauses. Along these lines for powerful investigation, logical proof are unavoidable parts. The acceptability of confirmations so acquired is additionally the matter of mesh concern. Utilization of third-degree technique for making admissions has not totally evaporated and their abuse has expanded step by step. The significant level of exoneration cases shows the disappointment on part of indictment predominantly because of ill-advised investigation and witness turning antagonistic. Presently, nowadays the onlooker upon whom the instance of the indictment depends has turned into uncommon animal varieties because of dread of the hoodlums. Additionally, violations are so all around arranged and proficiently carried out by utilizing innovation that confirmations or pieces of information at crime scene is elusive.³⁵

The utilization of forensic evidence may diminish the maltreatment of police controls in care. Custodial passing's, torment and mercilessness are wide spread in our framework and being accounted for as and when. Incomparable Court likewise enunciated in *D.K. Basu v. Territory of West Bengal*³⁶ authorizing offices must act inside the obligations of law and there is requirement for creating logical strategies for investigation and cross

³⁵ B.S. Nabar, *Forensic Science in Crime Investigation*, 2008, p. 1.

³⁶AIR 1997 SC 610

investigation of blamed as custodial passing's and torment is only a blow at the standard of law. There is a wide spread inclination to utilization of the forensic science in criminal investigation. Investigation must bring about finding reality and gathering of proof to the official courtroom in order to see goal of the legal framework i.e finding a fact and decrease the culpability in the public eye with an obstacle impact of reality. At the point when, the investigation office gathers the confirmations with no escape clause than just genuine organization of equity should be possible, in any case the path are only the worthless exercise.³⁷

2.2 FACTORS AFFECTING EVOLUTION OF APPLICATION OF SCIENCE IN CRIMINAL INVESTIGATION

In this manner the utilization of science in criminal investigation has emerged from the accompanying components³⁸.

- **Social change:** The quick change of provincial society to urban have made the well established procedure out of date and the need of logical confirmations has been emerged to diminish the pioneer rule.
- **Hiding Facilities:** The snappy methods for gives the office to the crooks to move a great many miles away in the wake of perpetrating crime in scarcely any hours, the individual in question may get away, conceal them. It is huge annihilation of the arrangement that they can't make sure about the nearness of lawbreakers.
- **Technical Knowledge:** The specialized information on a normal man has expanded so the commission of crime has been expanded with the assistance of simple methods for innovation. Along these lines the investigation official consequently required to familiarize themselves with the utilization of innovation and forensic science.

³⁷ Lovely Das Gupta, "Forensic Science and Crime – A Potent Weapon in Criminal Justice Administration" , *Cr.L.J.*, Feb. 2003, p. 38.

³⁸ Taylor, *Principles and Practices of Medical Jurisprudence*, 1965, p. 1.

- **Wide field:** The field of exercises of the criminal is extending at upgraded rate. The hoodlums are being national just as worldwide. In the cases like medication dealing, human dealing, budgetary cheats and frauds, the hoodlums make their gathering and plan sorted out crime.
- **Better proof:** The physical proof assessed by a specialist is consistently having an opportunity to be a genuine one. In the event that a unique mark is found at the area of crime, it can have a place with just a single individual. In the event that this individual happens to be suspect, he should represent its quality at the location of crime. Similarly, if a slug is recuperated from dead body it can be credited to just a single gun. In the event that this gun happens to be that of the denounced, he should represent its inclusion in the crime. Such proof is consistently verifiable.³⁹
- **Speedy and precise equity:** Victim is a definitive victim and he has option to get rapid successful investigation and trial. However, one can't deny casualty's enthusiasm for speedy equity. Logical confirmations may prompt rapid and exact heading for investigation and the declaration of the proof set up in the official courtrooms by the master is likewise impact the decisions.

2.3 PRINCIPLE OF CRIME SCENE INVESTIGATION

The principle that guides a helping hand in crime investigation is a concept called or termed as “Locard’s Exchange Principle”, which states that when someone comes or leaves the society or environment, something substantial is added and reduced from the site. Hence, this principle is can also be said as “Every contact leaves a trace”⁴⁰. The objective of this principle is to help investigator to create a bridge between suspects and victims, evidences, and crime scenes. The evidences which link a person to the scene is called as “associate evidence”. It includes items, like hair and fibers, blood, body fluid

³⁹B.R.Sharma,Forensic science in criminal investigation and trails, Central New Agency, Allahabad, 1974, p.4

⁴⁰ <http://www.forensicsciencesimplified.org/csi/principles.html>

fingerprint, weapons, these evidences help in answering the question “Who did the crime?”

In a case of *Shushant Singh Rajput*, it could be understood that reconstructive evidence permits investigators to acknowledge or curate what happened at the crime scene. As per the case, CBI officers recreated the whole scene to understand what actually happened when Shushant Singh died.

2.4 LAW OF INDIVIDUALITY

Each article, normal or man-made, has a singularity which isn't copied in some other item. This rule, from the start sight seems, by all accounts, to be in opposition to basic convictions and perceptions. The grains of sand or basic salt, seeds of plants or twins look precisely indistinguishable. In like manner, man-made articles: coins of a similar section made in a similar mint, cash notes printed with a similar printing square in a steady progression (barring sequential number) and typewriters of a similar make, model and bunch give off an impression of being undefined. However, the independence is consistently there. It is because of little blemishes in the materials, in the game plan of the precious stones, flawed stepping or because of incorporations of some unessential issue. The uniqueness has been checked in specific fields. The broadest work has been done in fingerprints. A large number of prints have been checked however no two fingerprints, even from two fingers of a similar individual have ever been seen as indistinguishable. The law of distinction is of principal significance in forensic science. Everything without exception engaged with a crime, has independence. On the off chance that the rational is set up, it interfaces the crime and the lawbreaker.⁴²

⁴¹ <https://economictimes.indiatimes.com/magazines/>

⁴² A. Laxminath, “Criminal Justice in India, Primitism to Post Modernism,” *Journal of Indian Law Institute*, Vol. 48, Jan. 2006, p. 26.

2.5 PRINCIPLE OF EXCHANGE

Agreement trades follow is the rule of trade. It was first articulated by the French researcher, Edmond Locard⁴³. As per the head, when a lawbreaker or his instruments of crime interact with the person in question or the articles encompassing him, they leave follows. Likewise, the crook or his instruments get follows from a similar contact. In this way, a shared trade of follows like happens between the crooks, the person in question and the articles associated with the crime if these follows are distinguished to the first source, viz., the lawbreaker or his instrument (or the other way around), they set up the contact and pin the crime on to the lawbreaker. The head of trade is suitably shown in attempt at manslaughter arguments and in offenses against individual. The fundamental necessity of the guideline is the right response to the inquiry 'What are the spots or items with which the lawbreaker or his apparatuses really came in contact?' If the exploring official can set up the purposes of contact, he is probably going to procure a rich reap of physical intimations:

1. If a criminal enters the premises through a ventilator, he leaves his impressions in dust on the ledge.
2. If he breaks a window or an entryway, the jimmy leaves its imprints on the wooden casing.
3. The criminal, who opens a safe by a hazardous, leaves the zone around and the garments (counting shoes) secured with protecting material just as some detonated and unexploded touchy materials.

The criminal is probably going to leave and convey minute follows as it were. It is only occasionally that he challenges or fails to leave or convey net articles or follows. On an exhaustive hunt, the unnoticeable follows will consistently be found in a wide range of

⁴³ <http://www.forensicsciencesimplified.org/csi/principles.html>

crimes. The moment follows interface the crime and the criminal as successfully as the gross articles or follows.⁴⁴

2.6 LAW OF PROGRESSIVE CHANGE

'Everything changes with the progression of time'. The pace of progress fluctuates hugely with various items. Its effect on forensic science is monstrous. The criminal experiences fast changes. In the event that he isn't caught in time, he gets unrecognizable with the exception of maybe through his fingerprints, bone breaks or different qualities of perpetual (similarly) nature which are not generally accessible. The location of event experiences fast changes. The climate, the vegetable development, and the living creatures (particularly individuals) roll out broad improvements in relatively brief periods. Longer the deferral in inspecting the scene, more noteworthy will be the changes. After some time, the scene may get unrecognizable. The articles associated with crime change steadily, the gun barrels release, metal items rust, the shoes endure extra mileage and the devices procure new surface examples. In course of time the items may lose all handy personality versus a specific crime. The standard, in this way, requests brief activity in all parts of criminal investigation.⁴⁵

2.7 PRINCIPLE OF COMPARISON

Just the like can be thought about is the rule of investigation. It underlines the need of giving like examples and examples to correlation with the addressed things: In a homicide case, a shot is recouped from the perished. The master opines that the slug has been discharged from a gun shooting high speed shots like a rifle. It is worthless to send shotguns or guns as the conceivable presume gun. A lot of hair is recuperated from the hands of a perished. The master opines that the hair has a place with a Negroid individual. Hair from people of white races for investigation won't be of any utilization.

⁴⁴ Modi, *Medical Jurisprudence and Toxicology*, 2002, p. 25.

⁴⁵ Abhijeet Sharma, "DNA Fingerprinting – A Legal Prospective", *Cr.LJ*, May 2004, p. 143.

The addressed composing is found to have been composing with a ball pen. To send wellspring pen as a conceivable instrument of composing is purposeless. Penmanship accessible on a photo supposedly composed on a divider was contrasted and the example composed on a paper. It didn't give advantageous outcomes. A second arrangement of examples was acquired by composing on a similar divider, at a similar stature and with a similar instrument and afterward captured. It permitted correlation⁴⁶.

2.8 PRINCIPLE OF ANALYSIS

The investigation can be no better than the example dissected. Inappropriate examining and tainting render the best investigation futile. The standard accentuates the need of right testing and right pressing for viable utilization of specialists. For instance, a lawbreaker while fleeing from the scene if even brushes against a painted surface. Some powdered particles of paint get kept upon his garments. The researching official pieces a couple of grams of paint from a similar surface with a pen-blade and sends it as control test. The aftereffect of the investigation shows that the two paints don't coordinate. One other model is a modest quantity of residue is recuperated from a little clingy fix of the shoe of a guilty party. The exploring official gathers around two kilograms of soil from the scene packs it in tin and sends it as a control test. The aftereffects of investigation are uncertain. In an assault case, the researching official gathers the garments of the person in question. The fabric conveys both blood and semen stains. The researching official dries the garments and packs them together and sends them through a railroad package. He needs to know whether the garments convey semen stains, and provided that this is true, to which blood bunch does the secretor have a place? The master builds up the presence of semen however neglects to give its blood gathering; since he finds powdered blood adhering to semen stain⁴⁷.

2.9 FACTS DO NOT LIE

⁴⁶ H.J. Walls, *Forensic Science: An Introductory to Scientific Crime Detection*, 2002, p. 17.

⁴⁷ Rattan Singh, "Narcoanalysis: A Volcano in Criminal Investigation System", *Cr.L.J.*, June 2010, p. 171.

'Realities don't lie, men can and do', thus the significance of incidental proof versus oral proof is progressively pertinent. The oral declaration of the observer is changed via auto recommendation, outside impact, proposals, portrayals and assessments of others and defense. Oral proof subsequently is shaded, though material proof is liberated from these ailments. Yet, the material proof can be controlled. Models, (I) an individual is in the military. He is seen doing obligation up to 1 am in the unit. He sneaks past the protected premises, approaches a hundred miles, submits a homicide, comes back to his unit, goes into the monitored premises covertly and is available on the obligation at 7.30 a.m. (ii) A compromises B with death. The following day B is discovered killed. B had no different adversaries aside from A. Police speculates A as the killer. He isn't found anyplace. He is pronounced a declared guilty party. Not long after 'A' shows up before a judge and says he had gone on a journey, however checking at the purportedly visited places, his visits to the spots are not set up. He is captured and arranged. In resistance, he creates the prison record. He was behind the bars at the pertinent time. He gets away from sentence.

2.10 RELATIONSHIP BETWEEN SCIENCE AND LAW

Change is a standard of the universe. Every single part of life is moved by progression of innovative turn of events. Presently a day each angle is administered by logical innovations and revelations logical information has made advances in lawful circle too.⁴⁸ Science and law are reliant to one another. The two of them fall under the equivalent legitimate meaning of sciences i.e objective way to deal with settle the complex multifactorial issues. The two of them contact each other at different focuses. Law controls science and individuals devoted in its exploration in like manner the last helps law in scattering of equity. Be that as it may, the accomplishments of balance between the two are a profoundly muddled issue.⁴⁹ If we inspect the principles of proof on which whenever was confined. One of them is all realities having objective probative worth, i.e

⁴⁸Vepa P. Sarthi, Law of evidence (Eastern Book Company: Lucknow, 2006) p. 7.

⁴⁹P. Venkatesh, Police diaries: Statements, Reports and investigations.

which help the court to arrive at a resolution upon the presence or non-presence of the issue in contention, are allowable in proof, except if avoided by some standard of vital importance.²⁰ With the approach of science and innovation, each part of human life has been changed and the court pardon isn't a special case to this standard. Courts also have seen the across-the-board presentation of various logical evidentiary strategies and advancement giving conceivably significant insightful tools.⁵⁰ The significance and the utility of the logical guides in the investigation of crime have been acknowledged. It doesn't require any further legitimization. The logical investigation shapes a significant chain in building up what is known as 'corpus delicti' or the body of the offence.⁵¹ In everywhere throughout the country and even the globe, the utilization of logical methods is grasping. The crime is available in each general public from days of yore, correspondingly the investigation and identification of crime is likewise of a similar period of crime. With the headway of science and innovation, the hoodlums familiarize themselves and receive the new strategies of carrying out crime. For such law breakers examiners need to receive the new methods of science and innovation in their investigations. The methods of cross investigation of crooks by utilizing third degree techniques are currently offering approach to new logical strategies for investigation. Specialists have been taking help of forensic science in breaking the cautiously carried out crime. Science is a vital part of the legitimate framework. Courts are vigorously relying on the science for choosing every single case.

2.11 CONCLUSION

Above given all the principles and laws explain broadly, how investigation takes place at a crime scene. How it is restructured by investigators then. The above given principles are followed so that investigator don't leave behind any relevant information and evidence to re

ach out to the culprit. And thereafter, there is no lacuna in the presentation

⁵⁰ Ekta Gupta, "Lie Detector Test: A Global Prospective", *Cr.L.J.*, Aug. 2006, p.180.

⁵¹ GunjanAgrahari, "Narco analysis, P300 test, its objective and evidentiary evaluation", *Cr.L.J.*, July 2007, p. 171.

of evidence in court so that the culprit could be punished for his crime, and no innocent gets punished.

CHAPTER THREE.2.1Genesis and Evolution of the Principle LEGAL FRAMEWORK RELATED TO FORENSIC INVESTIGATION OF HOMICIDE

3.1 INTRODUCTION

So long as the presumption of innocence remains a part of our legal system, evidence against an accused should come from source other than the accused himself. The purpose and general justification of criminal law is to protect the society, by maintaining social order, by method of social control that maximize individual freedom with the coercive framework of law.⁵²It is always the duty of the prosecution in criminal trial, to prove the guilt of the accused beyond reasonable doubt and hence, it cannot coerce the accused to produce document against himself, as Article 20(3) of the Constitution of India states as, “No person who is accused of an illegal act shall be forced to be a witness against himself.” This provision draws the light of protection against coercion of self-inputation.⁵³ Besides this Constitutional Protection⁵⁴ provisions under the Code of Criminal Procedure, 1972, under sections 53, 53-A, 91, 161, 162, 313, 315 and in Indian Evidence Act, 1872 under Sections 24, 25, 26, 27 also provides protection from self-incrimination as provided under Article 20(3) of the Constitution of India.

It therefore can be said that the reason as to why this principle emanated was to protect an individual who had not yet criminated in criminal offence, be subjected to third degree treatment and wrongfully made to incriminate himself and also helps the police to

⁵²A. Laxminath, “Criminal Justice in India, Primitism to Post Modernism,” *JILI*, Vol. 48, Jan. 2006, p. 29.

⁵³Shiv Narayan Dhingra, “Right to Silence of the Accused under Constitution of India,” *C.P.S.J.*, Vol. 41, Jan.-June 2007, p. 28.

⁵⁴Under Article 20(3) of the Constitution of India.

following the accusatorial system followed in our country to hunt, for evidence rather than “to sit in the shade rubbing pepper into some poor devil’s eyes.”⁵⁵

3.2 CONSTITUTIONAL PERSPECTIVE

3.2.1 *Genesis and Evolution of the Principle*

The origin of this principle appears to be in England in 14th century in protest against the inquisitorial methods of the Ecclesiastical courts.⁵⁶ In England major method of prosecution followed by the courts was the oath. Being man of God, the persons to be tried by it could not lie and if they admit their non-conformist views, they could be seriously punished. By the end of Charles 1st reign a privilege against self incrimination began to be recognized.⁵⁷ This principle before the statutory alteration in England, were carried out from America and becomes a part of its common law.⁵⁸ Under Amendment V of the American constitution it is stated that, ‘No individual could be compelled in any criminal offence to act as witness against oneself.’⁵⁹

The privilege ensures that no one can be compelled to give an answer to a question if the answer may implicate him in an offence or convict him of a crime and guarantees that no defendant must take the stand and be subject to cross examination.⁶⁰

Maxim ‘Nemo tentur prodare seipsum’ outlines the doctrinal root of the right against self-incrimination (i.e. no person shall be compelled in any

⁵⁵ThathagataChaudhary, “Narco-analysis and Article 20(3), Blending the realm of individual and societal rights,”*Cr.L.J.*, Jan. 2010, p. 29.

⁵⁶*Supra* note 1 at p. 29.

⁵⁷*Id.* at p. 29.

⁵⁸H.M. Seervai, *Constitutional Law of India: A Critical Commentary 1061* (Eastern Book Company, New Delhi, 2008).

⁵⁹D.V. Chatley, *Constitution of India with exhaustive analytical commentary*282 (LexisNexis, Butterworths1974).

⁶⁰George Felkens, *Constitutional Law for Criminal Justice*254 (Prentice Hall, New Delhi, 1978).

criminal case to give evidence against himself) and ‘due process of law as mentioned in the Magna Carta.’⁶¹

The main emphasis is laid on the sedition trial of John Lilbourn in 1637, where he denied to answer on the ground that he was unaware of the charges forth mentioned in complaint against him.⁶² John Lilbourn opposed the applicability of ex-officio oath and then later parliament abolished the Star Chamber and the High Commission in 1641. This event is considered landmark in the principle of the ‘Right to Silence’.

In 1648, a special committee was established by the Parliament with a purview to investigate and ponder into the members thoughts which was offensive to the army leaders. John Lilbourn was recurrently tried before this Committee but this time for his outspoken criticism against the leaders who were part of the struggle between the supporters at the monarch and Parliament in the English civil war. John Lilbourn did not answer to questions against or concerning himself and hence this invoked the spirit at Magna Carta.

He dictated the idea of due process of law as mentioned under Magna carta by drawing a bridge between the right against self-incrimination and the protection of a fair trial. John H. Langbein has directed several historical insights into the occurrence of ‘Right to Silence’. He enlightens with the fact that after abolishment of ex officio oaths in 1641, the practice of representing defendants with their own defense during criminal trials remained in practice thereafter.

⁶¹*Selvi v. State of Karnataka*, AIR 2010 SC 1975 (2010).

⁶²*Id.* at p. 2010.

The cases tried by Star Chamber and the High Commission basically deals with religious non-conformists and political dissenters, henceforth engaging into criticism. After abolition, the defendants failed to be represented by an advocate or right to request the presence of defense witnesses in criminal courts. Hence, defendants were left with no other way except to testify on their own behalf. The physical torture was removed for not answering or remaining silent but still defendant would undergo a conviction if he fails to reciprocate the charges made against him as proposed by the Judge and the prosecutor. During presentation of his own defense at the trial, there was a probability that the contents of such testimony might support the testimony which may lead to conviction. Gradually, it emerged that criminal defendant to be represented by a lawyer in criminal cases in the common law tradition as well. The treason Act of 1696, gave rise to 'right to counsel' and 'compulsory process' in cases involving treason offences.⁶⁴

The main feature of an inquisitional system is that the accused to narrate the facts on their own, that is, best evidence is testimony of the accused that could be gathered. The objective to assimilate this is that an innocent person should not be reluctant to testify against himself. This approach was verified and accepted in the inquisitional procedure of the ecclesiastical courts and now prevalent. The problem which could arise while compelling the accused to testify on his own behalf is that an ordinary person is unaware or lacks legal training to effectively reply to significative and misleading questioning, which might come from the prosecutor or the judge.

⁶⁴*Supra* note 10 at p. 2011.

It acts as a drawback for an innocent person where there may be unintentional irregularities or mistakes in the testimony. Most importantly, it's the defendant who need to prove innocence by refuting the charges placed against defendant himself. In the present era, defendants are protected with the help of right to cancel, the right to compulsory process, the right to be informed of charges, presumption of innocence, and the standard of proving guilt beyond reasonable doubt among others.⁶⁵

3.2.2 Principles behind right against self-incrimination

The reason why the principle of self incrimination developed and protection given under it has been explained by Lord Atkinson as, 'Society is stronger than the individual and is capable of inflicting more harm on the individual than the individual on the society'.⁶⁶

In India, Article 20(3) of Indian Constitution is the syncretistic result of the Anglo-Saxon Jurisprudence and India's realities culture and ethos, providing once again the cosmological nexus of human rights jurisprudence to the world over.⁶⁷ It deals with the privilege against self incrimination and is corresponding with Magna-Carta, and laws of other countries.

In India, Section 3 of the Act 15 of 1852 recognized that the accused in a criminal proceeding was not a competent as a compellable witness for or against himself.⁶⁸ This provision was repealed by the Evidence Act, 1872, meanwhile section 203 and 204 of Code of Criminal Procedure, 1861, provided respectively that no oath was to be administered to the accused and it was in the discretion of the magistrate to examine him.

⁶⁵*Ibid.*

⁶⁶*Supra* note 4 at p. 29.

⁶⁷Rattan Singh, "Narco analysis – A Volcano in Criminal Investigation System", *Cr.L.J.*, June 2010, p. 172.

⁶⁸*Supra* note 7 at p. 1061.

Section 250 of the Code of Criminal Procedure, 1872, made compulsory a general questioning of the accused after witnesses for the prosecution had been examined and section 345 provided that no oath or affirmation, was to be administered to the accused.⁶⁹ Their provisions were continued in the later codes of the criminal procedure and were incorporated into section 342 in CrPC, 1898.

3.3 SCOPE OF THE CONSTITUTIONAL RIGHT AGAINST SELF-INCRIMINATION

A great concern for an individual's dignity and inviolable right is to be found in the constitutional protection namely "the protection against self-incrimination."

Article 20(3) of the Indian Constitution states that, 'No individual accused of a crime shall act as witness against oneself.' This provision embodies the protection against compulsion of self-incrimination. The framers of the Constitution have had by and large participated in the independence struggle and most of them being advocates, were well aware of the police torture and methods of extracting confession, so it was incorporated in the constitution by the framers of the constitution and it was made a constitutional prohibition.

It is always the duty of the prosecution in criminal trial, to prove the guilt of the accused beyond reasonable doubt and hence, it cannot coerce the accused to produce documents against him. The conditions for the applicability of Article 20(3) are:

1. There must be a person accused of an offence.
2. There must be compulsion against such person.
3. Such compulsion must be to be a witness against himself.

On the basis of these conditions, the scope of this principle of right against self incrimination may be discussed as under:

⁶⁹*Ibid.*

3.3.1 Person accused of an offence

These words indicate that protection of this clause to criminal proceedings or proceedings of that nature before a court of law or other tribunal before whom a person may be accused of an 'offence' as defined under section 3 (38) of the General Clauses Act.

The person who is alleged to have been 'compelled' must at the time filled the character of an accused person. So, this clause applies only to a criminal prosecution the 'person compelled' must have been 'accused person' in a criminal prosecution and if a person not, at the time, accused of any criminal offence, is compelled to give evidence and such evidence ultimately led to a criminal prosecution being launched against him, there is no violation of Article 20(3). It would not therefore extend to parties and witnesses in civil proceedings, and proceeding other than criminal, in such proceedings, a person cannot refuse to give an answer on the plea that it might tend to subject him to a criminal prosecution at a future date.

When does a person become an accused? The decision in the *Nandini Sathpathy's* case⁷⁰ has now established that even at the stage of the police interrogation by way of investigation into an offence a person can be accused, and such a person is entitled to the protection of Article 20(3) of Constitution of India.

Thus, the guarantee of immunity is limited to those 'accused of an offence' and does not apply to witnesses or to civil proceedings. In England both the accused and the witnesses in any proceedings are protected from answering questions which may result in criminal prosecution or any other penalty or forfeiture.

3.3.2 'Compulsion' to be a witness

Compulsion in the context of Article 20(3) must mean what in law is called 'duress'. The compulsion here means "physical objective act" and not the state of

⁷⁰*NandiniSathpathy v. P.L. Dhani*, AIR 1978 SC 1075.

Individual mind who is giving any statement.⁷¹ Except where the mind has been so considered by some extraneous process, as to render making of the statement involuntary and therefore extorted.⁷²

An exemplary definition of ‘compulsion’ was established in *Nandini Sathpathy v. P.L. Dhani*⁷³ by Justice Krishna Iyar as, “Compulsion is evidence procured not only by physical threats or violence but also include mental torture, tiring interrogative prolixity, intimidatory methods and atmospheric pressure.” A person who voluntarily answers the questions from the witness box waives his privilege under clause 3 of Article 20.

In case *M.P. Sharma v. Satish Chandra*, question raised was what constitutes testimonial compulsion for the purpose of Article 20(1). With respect to this case, the court observed that issuance of search warrants during an investigation for the company affairs amount to an infringement as per elucidated under Article 20(3). The investigating agencies to conduct search of premises and seize the documents maintained by the said company is mentioned under Section 96 of the erstwhile CrPC, 1898. The important observation made by Jagannadhadas. J, are as follows:⁷⁵

“The phrase mentioned under Article 20(3) is ‘to be a witness’. It represents that a person can ‘be a witness’ either by giving or producing documents, oral evidence or making through gestures in the special case of a unsound witness.”

3.4 TO BE A WITNESS AGAINST HIMSELF

⁷¹Subhash Kashyap, *Constitutional Law of India*655 (Universal Law Publishers, New Delhi, 2008).

⁷²*Ibid.*

⁷³AIR 1978 SC 1025.

⁷⁴AIR 1954 SC 300.

⁷⁵*Id.* at p. 302.

The compulsion to which clause (3) of Article 20 refers mandates an accused person to be a witness against oneself, so the question arises as to what meaning is to be given to the phrase 'to be witness' against himself.

'To be a witness' is proportionate to 'furnishing evidence' during making oral or written statements, but not in the larger aspect to include thumb impression, impression of the palm or foot or finger or specimen writing for the purpose of identification.

The accused person cannot be asked to disclose documents or things which are incriminatory and contain his statements. It is not therefore permissible to a police officer to issue an order or the court to issue a summons to accused persons in his custody, or persons present in court, to attend and produce any document, for such, compulsory process amounts to compulsion within the meaning of Article 20(3).⁷⁶ Being a witness means furnishing evidence oral or documentary or testimonial. In its ordinary grammatical sense, it may mean only giving oral evidence, but in the present context it is not so limited.⁷⁷ The scope of Article 20(3) was considered by Supreme Court at great length in *Nandini Sathpathy v. P.L. Dhani*.⁷⁸ The Supreme Court observed:

1. It becomes compelled testimony violative under Article 20(3), if any mode such as mental or physical cruelty, external pressure whether direct or indirect but sufficiently done by the policeman in accordance to obtain information from any accused.
2. Legal penalty may be itself does not amount to duress, but may introduce an element of tension by mentioning it to the victim during interrogation. Compelled

⁷⁶*State of Gujrat v Shyam Lal Mohan Lal Choksi*, AIR 1965 SC 1251

⁷⁷*M.P Sharma v Satish Chandra*, AIR 1954 SC 300.

⁷⁸AIR 1978 SC 1025.

testimony was procured by evidence either by physical violence, environmental coercion, mental cruelty, interrogative prolixity, overbearing and intimidatory methods, external atmospheric pressure, etc.

3. The term 'Accused of an offence' expressly reflects accused *in praesenti* and not *in Futuro*. Any furnishing of an evidence given likely to have an incriminating impact or becoming witness against himself.
4. In examining the incriminatory character of the statement made by an accused is entitled to be considered and the court while adjudging will pen down the setting, the totality of circumstances, personal and social, the equation which have a bearing on making an answer substantially innocent but in effect guilt of import. However, unreasonable apprehensions, fanciful claims, and vague possibilities cannot be the eloping ground for an accused person. Individual is liable to answer where there is no clear tendency to incriminate.

This right has not only been embodied in statute books by most commonwealth jurisdictions but also accepted by the international community as a fundamental rule of criminal law.⁷⁹ This aspect relating to "right to silence", silence came to be included in Universal Declaration of Human Rights, 1948. Article 14(3)(g) of International Covenant on Civil and Political Rights, 1966 to which India is a party refers to various 'minimum guarantees' and illustrates that it's the right of everyone not to be compelled to testify against oneself or to make or confess his guilt. Article 6(2) of the European convention for the protection of the Human Rights and Fundamental Freedoms states that "every person charged with a criminal offence shall be presumed innocent until proved guilty according to law". Most commonwealth jurisdiction provides expressly or by necessary implications, a fundamental right against self-incrimination.

3.5 LEGISLATIVE PROVISIONS

⁷⁹Avinash Sharma, Right to Silence an indispensable right in Criminal Jurisprudence, *Nyaydeep*, Vol. IX, July 2008, p. 73.

The concept of criminal justice system is based on just, fair and equitable principles. The integrity of any judicial system depends upon the efficiency with which the trial is conducted. If any trial rests on the basis that the evidence adduced or the investigation procedure is flawed with the accused being forced to self incriminate, it would amount to losing accountability and virtually having no credibility of its own.

Apart from the protection under Article 20(3) of the Indian constitution which ensures fundamental right against self-incrimination. Article 21 guarantees fundamental right that is Right to life and personal liberty and further illustrates that the liberty of an individual can't be curtailed except by procedure laid down by law and this procedure followed must be fair, just and equitable.⁸⁰

Besides, these constitutional provisions, the legislative provisions under CrPC, 1973, Indian Evidence Act, 1872 also need to be discussed and analyzed.

3.6 CRIMINAL PROCEDURE CODE, 1973

The Code of Criminal Procedure, 1973 encompasses several provisions which reciprocates with the spirit of Article 20(3) of the Constitution of India.

3.6.1 Section 53

3.6.2 Examination of accused by medical practitioner at the request of Police

Officer: *This section provides as under:*

(1) When an individual is detained on a charge of committing a crime of such a nature and alleged to have been committed under such situation that there are reasonable grounds for believing that an examination of person will provide evidence for the commission of an offence, it is lawful for a registered medical practitioner, acting at the request of a police officer not below the rank of sub-inspector, and for any other person in good faith to aid and under his direction, to make such all examination of the

⁸⁰*Maneka Gandhi v. Union of India*, (1978) 1 SCC 248.

person arrested as is necessary in order to ascertain the facts which may provide such evidence, and to use such force as is reasonably necessary for that purpose.

(2) Whenever a female person is to be examined under this section, the examination shall be made under the supervision of a female registered medical practitioner.

In the explanation to the section, it is provided that:

(a) “Examination” shall include the examination of blood, semen, swab, blood stains and in case of sexual offences, hair samples and finger nail clippings, sputum and sweat by the use of modern and scientific techniques including the DNA Profiling and other tests which the registered medical practitioner thinks fit for a particular case.

(b) “Registered medical practitioner” means a medical practitioner who inherits some medical qualification as mentioned in section 2(h) of the Indian Medical Council Act, 1956 and whose name has been registered in a state medical register.

The medical examination contemplated by the section is in respect of ‘person arrested on a charge of committing an offence.’ Even if an accused person is released on bail, he is still ‘a person arrested on a charge of committing an offence.’⁸¹ The statements of objects and reasons of the code starts that this provision has been made to facilitate the effective administration.⁸²

It is open to the court which is seized of the matter to issue directions or to grant approval or permission to the police for carrying out further investigation, but after satisfying following conditions:⁸³

1. The person must have been arrested.

⁸¹R.V. Kelkar, *Criminal Procedure Code*, 72 (Eastern Book Company, New Delhi, 2005).

⁸²Ratan Lal & Dhiraj Lal, *Code of Criminal Procedure* 100 (Lexis Nexis, New Delhi, 2002).

⁸³*Ananth v. State of A.P.*, AIR 1977 AP 1797.

2. The arrest must have been made for committing an offence of such a nature and under circumstances where there are reasonable grounds for believing or accepting that the examination of an individual will provide evidences as to the commission of an offence.
3. The request for such examination to be made from police officer of rank not below the sub inspector.
4. The examination made by the registered medical practitioner with the aid of any other person acting in good faith.
5. The examination must be necessary to ascertain the facts which may provide evidence for the commission of a crime, and no more force is used as is required for that purpose.
6. Where a female person need to be examined, the examination must be made by or under the supervision of a female registered medical practitioner.
7. It can be easily inferred from the bare reading of the aforesaid section alongwith explanation that the term 'examination' used in the explanation is very wide and includes modern scientific techniques of investigation.⁸⁴ The obtaining of such evidence, it has been held, is not violative of Article 20(3) of the Constitution which grants protection against self-incrimination.

K.G. Balakrishnan, C.J.I. observed in *Selvi v. State of Karnataka*.⁸⁵

“We are inclined towards the viewpoint that the outcome of the impugned tests should be accepted as testimonial acts for the right against self-incrimination. Therefore, it would be prudent to illustrate that the phrases and other tests (which appears in the explanation to Sections 53, 53-A, 54 of CrPC) should be read along with it so as to understand its meaning to include those tests which involve the examination of physical evidence.”

⁸⁴Naresh Kumar, “Narco analysis test in investigation process: Law and Judiciary,” *MDULJ*, Vol. XIV, Part I, 2009, p. 110.

⁸⁵AIR 2010 SC 1975 (2036).

There are some huddles or obstructions to the dynamic interpretation of the amended explanation to Sections 53, 53-A, 54 of the CrPC,1973. The general words in question that is ‘and such other tests’ should be read in the same genre as the other forms of medical examination have been specified.⁸⁶

3.6.3 Section-53A – Examination of person accused of rape by Medical Practitioner:

This section provides as under:

1. When a person is detained on suspicion of committing a rape or an attempt to commit a rape and there are reasonable grounds to believe that an examination of the person will provide evidence as to the commission of such an offense, it shall be legal for a registered medical professional working in a government-run hospital or by a local authority, and in the absence of such a practitioner within sixteen kilometers of the place where the person was detained, for a local authority, to conduct the examination.
2. The registered medical practitioner conducting such examination shall, without delay, examine such person and prepare a report of his examination giving the following particulars, namely:--
 - i. the name and address of the accused and of the person by whom he was brought,
 - ii. the age of the accused,
 - iii. marks of injury, if any, on the person of the accused,

⁸⁶*Id.* at p. 2038.

- iv. The description of material taken from the person of the accused for DNA profiling, and".
 - v. Other material particulars in reasonable detail.
3. The report shall state precisely the reasons for each conclusion arrived at.
 4. The exact time of commencement and completion of the examination shall also be noted in the report.
 5. The registered medical practitioner shall, without delay, forward the report of the investigating officer, who shall forward it to the Magistrate referred to in section 173 as part of the documents referred to in clause (a) of sub-section (5) of that section.

This section was inserted in Criminal Procedure Code by Act 26 of 2005, to regulate the examination of the person of the accused of rape. The accused cannot deny such examination by seeking the help of Article 20(3).

3.6.4 Section 91 – Summons to produce documents or other things: This section provides as under:

1. Whenever any court or any officer in charge of a police station considers that the production of any document or other thing is necessary or desirable for the purposes of any investigation, inquiry, may issue a summons, or such officer a written order, to the person in whose possession or power such document or thing is believed to be requiring him to attend and produce it or to produce it at the time and place stated in the summons or order.
2. Any person required under this section merely to produce a document or other thing shall be deemed to have complied with the requisition if he causes such document or thing to be produced instead of attending personally to produce the same.
3. Nothing in this section shall be deemed (a) to affect sections 123 and 124 of the Indian Evidence Act, 1872, or the Banker's Books Evidence Act, 1891 or (b) to

apply to a letter, post card, telegram, or other document or any parcel or thing in the custody of the postal or telegraph authority.

Under section 91, a police officer or a court may, under certain circumstances issue an order or a summon for the production of document or other things if such production is necessary or desirable for the purpose of any investigation, inquiry, trial or other proceedings.

The language of the section is general and prima facie apt to include an accused person. But it would be an odd procedure for a court to issue a summons to an accused person, present in court 'to attend and produce' a document, and if this section so construed so widely as to include an accused person, it would be violative of Article 20(3) of the Constitution, which embodies the principle of right against self incrimination.⁸⁷

3.6.5 Section 161 – Examination of witness by Police: *This section provides as under:*

1. Any police officer conducting an investigation in accordance with this Chapter, or any police officer not below the rank that the State Government may, by general or special order, prescribe in this regard, acting on the officer's request, may question orally any person ostensibly familiar with the facts and circumstances of the case.
2. This individual is required to honestly respond to any inquiries from the officer regarding the case, with the exception of inquiries whose outcomes would subject him to criminal prosecution, fines, or forfeiture.
3. The police officer may put any statement made to him in writing during an examination conducted in accordance with this section, and if he does, he must create a separate and accurate record of each such person's statement.

⁸⁷*State of Gujarat v. ShyamLal*, AIR 1965 SC 1251.

The object of section 161 is to obtain evidence which may later be produced at the trial. Sub-section (2) of this section provides that an accused is not bound to make any statement during the police interrogation and is entitled to keep his mouth shut if the answer sought has a reasonable prospect of exposing him in some other accusation actual or imminent, even though the investigation under way is not with reference to that. It was also held in the case of *Nandini Sathpathy v. P.L. Dhani*,⁸⁸ that section 161 of Criminal Procedure Code, 1973 and Article 20(3) of the constitution substantially cover the same area, so far as the police investigation are concerned. The ban on self accusation and the right to silence when one accusation or trial is underway goes beyond that care and protect the accused in regard to other offences.

The 'right against self-incrimination' shields both people who have been legally charged and those who are being investigated as potential suspects in criminal cases. It also includes witnesses who fear that by providing information, the investigation they are a part of or even instances unrelated to it, could result in criminal charges against them.⁸⁹

Section 132 of the Evidence Act restricts the use of this protection to witnesses during the trial stage, notwithstanding the fact that section 161(2) of the CrPC casts a wide protective net to shield the formally accused persons as well as suspects and witnesses throughout the investigative stage. According to the later clauses, witnesses cannot decline to respond to inquiries during a trial on the grounds that their responses would implicate them. A prosecution for giving false testimony is the only offense for which the proviso to this section states that the contents of such answers cannot subject the witnesses to detention or prosecution.

⁸⁸(1978) 2 SCC 424.

⁸⁹*Selviv. State of Karnataka*, AIR 2010 SC 1974 (2010).

⁹⁰Section 132 – Indian Evidence Act, 1860

As a result, under section 162(2) of the CrPC, the protection granted to witnesses at the trial stage is less extensive than that granted to the accused, suspects, and witnesses throughout the inquiry. Additionally, it has a smaller scope than the defense provided to the defendant during the trial stage under section 313(3) and proviso (b) to section 315(1). The purpose of the law is to keep a criminal trial's fact-finding process intact.⁹¹

The "right against self-incrimination" is not commonly available to those who are questioned during proceedings that are not governed by the code because it is only granted to suspects and witnesses under section 161(2) of the Criminal Procedure Code. There is a difference between criminal processes and those with the potential to result in punitive measures but which cannot be classified as criminal proceedings. The prevailing view has been that witnesses cannot often rely on Article 20(3) during proceedings that cannot be classified as criminal proceedings. Only once a person has been formally accused of committing an offense does the protection of Article 20(3) become accessible in administrative and quasi-criminal processes. For instance, the issue of admissibility at a statement given before an inspector who was appointed under the Companies Act of 1923 to investigate the activities of a firm and report thereon came up in *Raja Narayanlal Bansilal v. Maneckphiroz Mistry*. Whether the individuals who were examined by the concerned officer may rely on the protection provided by Article 20(3) needed to be determined. The query was addressed as:

“According to the relevant sections' organizational structure, the inquiry starts out by taking a general look at how the company's affairs are managed in order to determine whether or not any irregularities have been committed. There is no formal or informal accusation made against any specific person in such a situation, although there may be a general allegation that the affairs are being handled improperly, illegally, and irregularly. Who would be responsible for the affairs that are allegedly being handled improperly would be decided at the conclusion of the investigation.

⁹¹*Selvi v. State of Karnataka*, AIR 2010 SC 1974 (2020).

⁹²AIR 1961 SC 429.

There is no one who has been charged of committing an offense at the outset of the investigation or at any point in the course of its proceedings. A wide inquiry of a company's operations as is being envisaged, in our opinion, cannot be viewed as an investigation beginning with an accusation as defined by Article 20(3) of the Constitution.”⁹³

3.6.6 Section 162 – Statements to police not to be signed: Use of statements in evidence: *This section provides as under:*

(1) No statement made by any person to a police officer in the course of investigation under this chapter shall, if reduced to writing, be signed by the person making it, nor shall any such statement or any record thereof, whether in a police diary or otherwise, or any part of such statement or record, be used for any purpose, save as hereinafter provided, at any inquiry or trial in respect of any offence under investigation at the time when such statement was made.

Provided that when any witness is called for the prosecution in such inquiry or trial whose statement has been reduced into writing as aforesaid, any part of his statement, if duly proved, may be used by the accused, and with the permission of the court, by the prosecution, to contradict such witness in the manner provided by section 145 of the Indian Evidence Act, 1872 and when any part of such statement is so used, any part thereof may also be used in the re-examination of such witnesses but for the purpose only at explaining any matter referred to in his cross-examination.

(2) Nothing in this section shall be deemed to apply to any statement falling within the provisions of clause (1) of section 32 of the Indian Evidence Act, 1872 or to affect the provisions of section 27 of that Act.

⁹³*Id.* at p. 438.

Explanation – An omission to state a fact or circumstances in the statement referred to in sub-section (1) may amount to contradiction if the same appears to be significant and otherwise relevant having regard to the context in which such omission occurs and whether any omission amounts to an contradiction in the particular context shall be question of fact.

This section prohibits an officer to obtain information under compulsion and provides that no investigating officer can extract any information by using inducement, threat or promise as also provided under section 24 of the Indian Evidence Act, 1872. The guidelines provided by section 161(1) are applicable not only in respect of a police officer but also in respect of a person in authority.⁹⁴

3.6.7 Section 313 – Power to examine the accused: This section provides as under:

(1) During every investigation or trial, the court will allow the accused to explain any circumstances that appear in the evidence against him.

(a) May at any time, without warning the accused, ask him the questions the court deems relevant.;

(b) Should ask him broad questions about the matter after the prosecution's witnesses have been questioned and before his defense is called:

As long as the court has waived the accused's personal appearance in a summons case, it may likewise waive the accused's examination under subsection (b).

(1) The accused is not required to take an oath during the examination described in subsection (1).

(2) The accused may not subject himself to penalty by refusing to respond to such a question or by providing incorrect information in response to it..

⁹⁴*Supra* note 30 at p. 148.

(3) The accused's replies may be taken into account during this investigation or trial and used as evidence for or against him in any subsequent investigations into or trials for any other offenses that they may have tended to prove he had committed.

This section empowers the court to examine the accused after the evidence for the prosecution has been taken. The object of empowering the court to examine the accused is to give him an opportunity of explaining any circumstances which may incriminate him.⁹⁵

No presumption arises, ipso facto, from the silence of a accused person. The fact of silence may, with all other circumstances of the case, be taken into account in a proper case, but even then, it must be clearly borne in mind that an accused person always has a right to remain silent, if he wishes; and, the silence of the accused must never be allowed, to any degree, to become a substitute for proof by the prosecution of its case.⁹⁶

This section of the Criminal Procedure Code, 1973, protects the right to silence at the time of the trial and states that the accused shall not be liable to punishment for reason of refusal to answer any question put to him.⁹⁷

3.6.8 Section 315 – Accused person to be a competent witness: *This section provides as under:*

(1) Any person accused of an offence before a Criminal Court shall be a competent witness for the defense and may give evidence on oath in disproof of the charges made against him or any person charged together with him at the same trial:

Provided that-

(a) he shall not be called as a witness except on his own request in writing;

⁹⁵Rattan Lal and Dhiraj Lal', The Code of Criminal Procedure 602 (Lexis Nexis, 2010).

⁹⁶*Supra* note 30 at p. 956.

⁹⁷*Supra* note 27 at p. 89.

(b) His refusal to provide testimony must not be the subject of any criticism by the Court or the parties, nor shall it give rise to any inferences against him or any co-defendant at the same trial.

Any person against whom proceedings are instituted in any Criminal Court under section 98, or section 107, or section 108, or section 109, or section 110, or under Chapter IX or under Part B, Part C or Part D of Chapter X, may offer himself as a witness in such proceedings:

Provided that in proceedings under section 108, section 109 or section 110, the failure of such person to give evidence shall not be made the subject or any comment by any of the parties or the court or give rise to any presumption against him or any other person proceeded against together with him at the same inquiry.

This section lays down that an accused person is a competent witness for the defense and like any other witness he is entitled to give evidence on oath in disproof of the case laid against him by prosecution.⁹⁸The Supreme Court in *Gajendra Singh v. State of Rajasthan*,⁹⁹said that he could not be denied the opportunity of producing documents on which he wanted to rely. He was not to be disallowed only because he did not do so before his evidence was recorded. The matter was remitted to the trial court to enable the court to permit him to produce the documents.¹⁰⁰

Section 315(1) of the Criminal Procedure Code contains proviso and clause (b) of said proviso, provides that failure of the accused person to give evidence shall not be made the subject of any comment by any of the parties or court or gives rise to any presumption against himself and the other co-accused.¹⁰¹

3.7 INDIAN EVIDENCE ACT, 1872

⁹⁸*Supra* note 30 at p. 967.

⁹⁹(1998) 8 SCC 612.

¹⁰⁰*Supra* note 43 at p. 615.

¹⁰¹*Supra* note 29 at p. 415.

In Indian Evidence Act, 1872, under various sections also provides right against self-incrimination as provided under Article 20(3) of Constitution of India.

3.7.1 Section 24 – Confession caused by inducement, threat or promise, when irrelevant in criminal proceedings: This section provides as under:

(1) A confession made by an accused person is irrelevant in a criminal proceeding if the court determines that it was made as a result of any inducement, threat, or promise relating to the charge against the accused person, coming from a person in authority, and is sufficient, in the court's opinion, to give the accused person grounds that would appear reasonable to him for believing that by making the confession, he would gain any advantage or avoid a punishment.

Section 24 of the Indian Evidence Act, 1972, is an extension or reflection of Article 20(3) of the Constitution of India. This section provides that confession made by an accused is irrelevant in a criminal proceeding, if the making of the confession appears to the court to have been caused by any inducement, threat or promise. The ground of the reject of a confession, which is not voluntary, is a danger that a prisoner may be induced by hope or fear to incriminate himself. Whenever it is clear that the confession was made under threat the same has been held to be in admissible and irrelevant.¹⁰²

In a recent decision in *Thiogbajam v. State of Manipur*¹⁰³ this principle has been reaffirmed by the Guwahati High Court that the confession must not be the result of inducement, threat or promise as envisaged under the Evidence Act. Thus, the accused can invoke his constitutional privilege of silence and refuse to answer any questions that are put to him when the answer is likely to incriminate him and in such a care no adverse inference can be drawn against him.

¹⁰²GunjanAgrahari, “Narcoanalyais P-300 Test, its objectives and evidentiary evaluation”, Cr.L.J., July 2007, p. 173.

¹⁰³(2005) Cr.L.J. 4780 (Guj).

3.7.2 Section 25 – Confession to police officer not to be proved: *This section provides as under:*

No confession made shall be proved as against a person accused of any offence.

Similar protection is available to the accused under section 25 of Indian Evidence Act, 1972 as provided in the Article 20(3) of the Constitution. The legislature, apprehensive that the police might extort confessions from accused by intimidatory methods, inserted this section as a measure to safeguard for the accused.

3.7.3 Section 26 – Confession by accused while in police custody not to be proved against him: *No confession made by a person while they are in the custody of a police officer may be used against them unless they do so in the presence of a magistrate.*

Similarly, section 26 of Indian Evidence Act renders any confession made in police custody to be inadmissible except when the same is made in presence of magistrate. This section is based on the same fear i.e. use of force by the police.

Thus, it is clear that the court can't draw any adverse inference against the accused from his silence or refusal to answer any questions. It is manifest to everyone's experience that from a moment the person feels himself in custody, his mental condition undergoes a remarkable change and he naturally becomes much more accessible to every influence that address itself to either his hopes or fear.

3.7.4 Section 27 – How much of Information received from the accused may be proved: *This section provides as under:*

With the proviso that any information obtained from a person in a police officer's custody who has been charged with any crime that leads to the discovery of a fact may be used to prove that fact, whether or not the information amounts to a confession.

This section is an exception to the exclusionary rules enacted in sections 24, 25 and 26, which are themselves exceptions to the rule that confession is provable against its maker as an admission.¹⁰⁴ This section seems to be based on the view that if a fact is actually discovered in consequence of information given, some guarantee is afforded thereby that the information was true and accordingly can be safely allowed to be given in evidence.¹⁰⁵

In the case of *State of Bombay v. Kathi Kalu Oghad*,¹⁰⁶ it was urged by the defense that section 27 was ultra vires, as it offends the protection guaranteed under Article 20(3), Supreme Court of India in this case held that compulsion not being inherent or implicit of the fact of the information having been received from the person in custody, the contention that section 27 of the Evidence Act necessarily infringes Article 20(3) of the Constitution cannot be accepted. Further as to the statements admissible under section 27, the court held that if the compulsion proved in the court statement cannot be admitted as violated the Article 20(3) right against self-incrimination.¹⁰⁷

It has already been discussed that section 161, CrPC. which protects the accused as well as the suspect and witnesses who are examined during the course of investigation in criminal case. The principle of confirmation by subsequent fact, which states that statements made while under arrest can only be proved by the later discovery of the pertinent facts rather than their independent discovery, is included in Section 27 of the Evidence Act. As a result, such declarations could also be referred to as those that "furnish a link in the chain of evidence" required for a successful prosecution.¹⁰⁸

¹⁰⁴M. Monir, *Law of Evidence*, 182 (Universal Law Publications, New Delhi, 2009).

¹⁰⁵*Ibid.*

¹⁰⁶(1963) SCJ 195.

¹⁰⁷*Id.* at p. 196.

¹⁰⁸*Selvi v. State of Karnataka*, AIR 2010 SC 1974 (2023).

This provision permits the derivative use of custodial statements in the ordinary course of events. In Indian law, there is no automatic presumption that the custodial statements have been extracted through compulsion.

In the case of *State of Bombay v. Kathi Kalu Oghad*, the relationship between section 27 of the Evidence Act and article 20(3) of the Constitution was made clear. Jagannath Das made the observation in the majority opinion., J.:

“This clause allows for the admission of information provided to a police officer by an accused person that led to the discovery of a fact that may or may not prove to be incriminating. The question is not raised if the material is not damning to the source. It only becomes a problem when the information being given has an incriminatory nature. The self-incriminating information provided by an accused person without being threatened will be admissible in evidence and will not be subject to Article 20(3) of the Constitution because there was no coercion. The provisions of Section 27 of the Evidence Act must therefore be deemed to be outside the scope of the aforementioned restriction unless compulsion was used to collect the information.”

3.8 CONCLUSION

To summarize, it may be said that Article 20(3) of the Constitution was primarily incorporated to ensure that no torture is subjected on the accused to extract confession. This right was raised to the constitutional pedestal despite adequate protection being available under Criminal Procedure Code, 1973 and in Indian Evidence Act, 1872 but the intent of the legislature was never to shut out scientific investigation otherwise the same could have been expressly provided in the statute itself. If the courts are apprehensive of irregularities in obtaining samples of blood, hair or other bodily fluids, adequate safeguards like taking samples in the presence of court appointed amicus curiae or in

¹⁰⁹AIR 1961 SC 1808 (1833).

front of court itself can be resorted to. Imposing total ban on taking samples of blood, bodily fluids to match them with the scene of crime would do no good but falter the investigation and ultimately lead to miscarriage of justice. It has been rightly observed by Ashok Chugh that if the right against self-incrimination is to be considered as one of the fundamental rights tenets of fair trial peculiarities like narrow construction of the term 'to be a witness' and distinction between 'real' and 'testimonial' evidence are unnecessary to achieve the equilibrium between societies needs to control crime and conviction of guilty vis-à-vis protection of individual from unlawful and unfair treatment.¹¹⁰

An important aspect of Justice Malimath Committee report is also with regard to the inviolable rule as to the 'right to silence' of the accused at all times, and in all cases. The Law Commission of India in its 180th report has stated unequivocally that any move to amend the provisions of the Code of Criminal Procedure, 1973 in the manner that Malimath Committee has suggested would be ultra-vires of Article 20(3) and Article 21 of the Constitution of India.

¹¹⁰Ashok Chugh, "A reassessment of self-incrimination clause", (2006) 8 SCC Journal 19.

CHAPTER FOUR

JUDICIAL APPROACH REGARDING FORENSIC INVESTIGATION OF HOMICIDE

4.1 INTRODUCTION

One can understand the policy adopted by the courts that a person is presumed to be innocent till proved guilty, but one can't understand the policy of the courts that the investigating agency is not to be cooperated in investigation by accused and all hurdles are to be created in the way of investigating agency in proving the guilt of the accused.¹¹¹

This was not the true spirit of Article 20(3), as long as the “presumption of innocence” remains as one of the fundamental canons of criminal jurisprudence that evidence against the accused should come from the sources other than the accused.¹¹²

The wide interpretation given by the courts to the provision of Article 20(3) of the Constitution and other statutory provisions guaranteeing the right against self-incrimination is clearly reflected in *Nandini Sathpathy's* case.¹¹³ A Deputy Superintendent of Police from the Vigilance (Directorate of Vigilance) in Cuttack filed a 113A complaint under section 179 of the Indian Penal Code against the appellant, the former chief minister of Orissa, claiming offense-related facts before the Sub-divisional Magistrate in Sadar, Cuttack. The magistrate then officially recognized the crime and issued a summons for the accused (Smt. Nandini Satpathy) to appear in court. Aggrieved by the action of the Magistrate and urging that the complaint did not and could not disclose an offence, the

¹¹¹Shiv Narayan Dhingra, “Right to Silence of the accused under the Constitution of India”, *CPSJ*, Vol. 41, Jan-June 2007, p. 35.

¹¹²N. Ravi and S. Shrinivash, “Rule against testimonial Compulsion and Judicial Reverence”, *Cr.L.J.*, Aug. 2004, p. 243.

¹¹³*NandiniSathpathy v. P.L. Dhani*, AIR 1978 SC 1025.

agitated appellant moved to the High Court under Article 226 of the Constitution, challenging the validity of magisterial proceeding.¹¹⁴

The main facts of this case are that Smt. Nandini Sathpathy was directed to appear at the vigilance police station for being examined in connection with a case registered against her by the DSP, Vigilance Cuttack, under section 5(2) read with section 5(1)(d) and (e) of the Prevention of Corruption Act and under sections 161/165 and 120-B and 109 of Indian Penal Code. She was questioned during the investigation using a lengthy list of written questions that were provided to her. Over the years of the accused, who held a public position and exercised public power for a considerable amount of time, the gravamen of the accusation was one of acquisition of assets disproportionate to the known, licit sources of income and probable resources during which, according to the Police version, the lady by receipt of illegal gratification enhanced herself.

The general argument, which was unsuccessfully made before the High Court, was that the charge was based on the defendant's refusal to respond to police interrogations, but that this argument was unsupportable because both the protections provided by Article 20(3) of the Constitution and the immunity under Section 161(2) of the Criminal Procedure Code, 1973 were broad enough to protect the defendant from the charge despite her refusal. She appealed to the Supreme Court using a certificate provided under Article 132(1) after the High Court rejected her claim that the pre-emptive process was unlawful and unconstitutional, which gave rise to the aforementioned appeal case. The Supreme Court ruled that in this case, the term "compelled testimony" encompasses evidence obtained not only through physical coercion or threat of physical harm, but also through psychological torture, pressure from the environment, long and tiresome interrogations, excessively domineering tactics, and similar techniques.

The prohibitive sweep of Article 20(3) goes back to the stage of police interrogation – not, as contended, commencing in the court only. In Court's opinion, the provisions of

¹¹⁴*Id.* at p. 1028.

In terms of police investigations, Article 20(3) and Section 161(1) essentially cover the same territory. The prohibition on self-accusation and the right to remain silent while an investigation or trial is ongoing safeguard the accused in relation to other offenses that are either pending or imminent and may discourage him from voluntarily disclosing criminatory information.¹¹⁵

The judicial attitude as to the validity of the forensic science tests may be discussed further in this chapter.

4.2 LIE DETECTION TEST

Conflicting opinions are being expressed by different courts regarding admissibility and constitutionality of lie detection tests as reflected in the judgments delivered from time to time by the different high courts and Supreme Court.

In *Townsend v. Sain*, the U.S. Supreme Court ruled against the forensic use of a medication that induces truthfulness.¹¹⁶ In this instance, a heroin addict was detained on suspicion of murder and robbery. He started to exhibit significant withdrawal symptoms while in detention, so the police officers called in a doctor. The doctor administered a combination dose of 1/8 grain of phenobarbital and 1/230 grain of hyoscine through injection to alleviate these withdrawal symptoms. This dosage seemed to have a soothing effect on Townsend because, after the doctor left, he immediately reacted to police interrogation and eventually confessed. A court reporter accurately and completely documented the petitioner's statements. He was brought to the prosecutor's office the following day, where he signed the transcriptions of his statements from the day before.

When the case went to trial, the petitioner's attorney filed a move to exclude the statements' transcripts from the evidence.

¹¹⁵*Id.* at p. 1046.

¹¹⁶372 US 293 (1963); Quoted in *Selvi v. State of Karnataka*, AIR 2010 SC 1974 (1999).

The trial judge, however, rejected this request and admitted the confessional statement's transcription made by the court reporter as proof. Townsend was subsequently found guilty by a jury, resulting in his conviction. One of the main defenses put forth when the petitioner filed a habeas corpus application before a Federal District Court was that the fact that Scopolamine is a truth-serum was not brought up during the motion to suppress the statements or even at the trial before the state court.

The habeas corpus petition was refused by the Federal District court without a full evidentiary hearing, and the Court of Appeals upheld this ruling. As a result, the case was heard by the US Supreme Court. The Federal District Court erred in rejecting a writ of habeas corpus without holding a plenary evidentiary hearing to consider the voluntariness of the confessional confessions, the Supreme Court ruled in a decision written by Earl Warren, C.J. Both the majority opinion and the minority view (Stewart, J.) agreed that a confession obtained through the use of drugs is inadmissible in a criminal prosecution under the constitution. Warren, C.J. made the following observation:¹¹⁷

“This court has set the rules governing the admissibility of confessions as evidence in a number of decisions. A confession is not admissible because it was compelled if a person's "will was overborne" or if it was not "the result of a regional intellect and free will." These requirements apply whether a confession is the result of physical or psychological pressure, and they, of course, also apply to statements made under the influence of drugs. It is difficult to think of a circumstance in which a confession would be less the result of a free mind or less willing than when it is prompted by a substance acting as a "truth-serum." It is unimportant that the medicine may have been provided and that those who are not knowledgeable with hyoscine's characteristics may have had doubts. Any police interrogation that results in a confession that was not the result of free thought renders such confession inadmissible.”

¹¹⁷As quoted in *Selvi v. State of Karnataka*, AIR 2010 SC 1974 (2000).

In another case of *United States v. Swanson*,¹¹⁸ two people were found guilty of conspiring to extort money through the use of threatening letters. One of the defendants claimed during the trial that he had amnesia and did not remember his accused actions of calling the co-defendant and sending threatening letters. His attorney asked for the admission of a taped interview between the defendant and the psychiatrist that had been performed while the defendant was under the effect of sodium Amytal in order to demonstrate this forgetfulness. According to the drug-induced claims, the plan was a joke or hoax. The fifth circuit court upheld the trial court's decision not to admit the details of this sodium amytal-induced interview. Additionally, when holding the same, it was shown:

“Furthermore, the approach for producing recollection is no more reliable than any drug-induced recall for events that the person is otherwise unable to recall. The sodium Amytal does not guarantee truthful statements, according to both psychiatrists who testified in this case. With such tensions as a predicate, no recreation or memory by means of an image, demonstration, drug-stimulated recollection, or otherwise, would be inadmissible.”

Since the person subjected to narco-analysis 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 *Harvath v. R.*,¹¹⁹ The Supreme Court of Canada ruled that because the remarks were not made voluntarily, they cannot be used as evidence. Additionally, it was ruled that any later remarks would be void if they had any connection to the words spoken while under hypnosis. In that case, a police officer trained in the use of hypnotic techniques interrogated a 17-year-old kid suspected of killing his mother. During the deliberate interruptions in the interrogation sessions, the boy had fallen into a mild hypnotic state and had eventually confessed to the commission of the

¹¹⁸572 F 2d 523 (5th Circ. 1978); Quoted in *Selvi v. State of Karnataka* AIR 2010 SC 1974 (2000).

¹¹⁹(1979) 44 CCC 385; Quoted in *Selvi v. State of Karnataka*, AIR 2010 SC 1974 (2002).

murder. He later reiterated the admissions in front of the detectives and put his signature on a confessional statement. All of these statements were excluded from evidence by the trial judge, which resulted in acquittal. This ruling had been overturned by the Court of Appeal, thus the Supreme Court heard an appeal. It was brought up that Lord Sumner's well-known remark in *Ibrahim v. R.*¹²⁰

“It has long been established that a positive rule of English Criminal law that no statement made by an accused is admissible against him unless it is shown by the prosecution to have been a voluntary statement, in the sense that it has not been obtained from him either by fear of prejudice or hope of advantage exercised or held out by a person in authority.”

After examining several precedents, Spence, J. held that the total circumstances surrounding the interrogation should be considered, with no particular emphasis placed on the hypnosis. It was observed that in this particular case the interrogation of the accused had resulted in his complete emotional disintegration, and hence the statements given were inadmissible.¹²¹

In terms of legal precedents, *Fyre v. United States* dealt with a test that was a forerunner to the polygraph that identified deceit by monitoring variations in systolic blood pressure. In that case, the defendant had undergone testing prior to the trial, and the defendant's attorney had asked the court to permit the scientist who had administered the test to testify as an expert regarding the findings. The request for admitting such testimony was denied by the appellate court as well as the trial court. The appellate court admitted the considerations that would govern the admissibility of expert testimony based on the scientific insights and held that:¹²³

¹²⁰*Ibid.*

¹²¹Quoted in *Selvi v. State of Karnataka*, AIR 2010, SC 1974 (2003).

¹²²(1923) 54 App. D.C. 46.

¹²³*Ibid.*

“It is challenging to pinpoint exactly when a scientific finding or concept transitions from the experimental to the demonstrative stages. The courts will generally accept expert testimony derived from a well-known scientific principle or discovery, but the thing from which the deduction is made must be sufficiently established to have attained widespread acceptance in the specific field to which it belongs. This area of the twilight zone is where the evidential force of the principle must be recognized. We believe that systolic blood pressure deception has not yet attained the level of scientific standing among physiological and psychological authority to permit the courts to accept expert testimony based on research that has already been done.”

The admission of scientific evidence has been governed for many years by the criteria of "general acceptance in the particular field." The U.S. Supreme Court altered it years later in *Daubert v. Merrell Dow Pharmaceuticals Inc.*¹²⁴ In one instance, the petitioners had filed legal action against a pharmaceutical corporation that had advertised the prescription medicine "Bendectin." They claimed that using this medicine while pregnant had led to birth abnormalities in the offspring that were born to those mothers. The pharmaceutical business had provided an affidavit written by an epidemiologist to refute these assertions. In order to bolster their claims, the petitioners also provided expert opinion testimony. The District Court had ruled in favor of the company, finding that their scientific evidence met the standard of "general acceptance in the particular field," as opposed to the petitioners' expert opinion testimony, which failed to meet the aforementioned standard.

It was noted that such an investigation should be flexible and that its main emphasis should be on ideas and methods rather than the results they produce. It was argued that rather than completely excluding scientific evidence due to the high burden of establishing general acceptance in the relevant field, such evidence could instead be admitted and then challenged using traditional procedures like cross-examination, the presentation of opposing evidence, and careful instruction of juries regarding the burden of proof.

¹²⁴509 US 579 (1993); Quoted in *Selvi v. State of Karnataka*, AIR 2010 SC 1974 (1988).

'Brain Fingerprinting test in criminal cases' is another method of lie detection. It will be helpful to look at the earlier predecessors since this method is thought to be an advanced form of the P300 waves test.

In *Harrington v. IOWA*,¹²⁵ in 1978, Tarry J. Harrington (the appellant) was found guilty of murder; the crime was reportedly committed during an attempted robbery. The testimony of his accomplice was a vital part of the incriminating evidence. However, it was later discovered that the accomplice's testimony was influenced by the investigative police's promise of leniency, and questions were also raised regarding the reliability of other witnesses. Later, it was discovered that the police had withheld from the defense several investigative reports that would have pointed to the involvement of another person in the crime at the time of the trial. Additionally, under the guidance of Dr. Lawrence Farwell, Harrington had undertaken a "Brian Fingerprinting Test." The test results revealed that he had no recollection of the 'probes' connected to the murderous crime. Therefore, Harrington petitioned the District Court for a reversal of his judgment and an order for a new trial. The District Court, however, turned down this request for post-conviction relief. The Supreme Court of Iowa heard an appeal after that.¹²⁶

However, the Supreme Court of Iowa did not consider the significance or trustworthiness of the results of the "Brian Fingerprinting" test and did not even give them any consideration. "We give it no further consideration because scientific evidence is not necessary to a resolution of this appeal," it was noted.¹²⁷

¹²⁵659 N.W. zd. 509 (2003).

¹²⁶*Id.* at p. 2006.

¹²⁷*Id.* at p. 2007.

In other case, *Slaughter v. Oklahoma*,¹²⁸ Jimmy Ray Slaughter had received a death sentence after being found guilty of two murders. He then submitted a post-conviction relief claim to the court of criminal appeals in Oklahoma, attempting to bring in evidence an affidavit and supporting documentation for a "Brain Fingerprinting" test. Dr. Lawrence Farwell, who administered the test, concluded that the petitioner lacked understanding of the "Salient features of the crime scene." With regard to the affidavits based on the 'Brain Fingerprinting' test, it was held that:¹²⁹

“Dr. Farwell makes certain claims about the Brain Fingerprinting test that are not supported by anything other than his base affidavit. He asserts that the method has undergone thorough testing and has been presented to and analyzed by several people. Review papers published in reputable scientific journals have a very low error rate, objective operating criteria, and are widely acknowledged by the "relevant scientific community." These simple assertions, however, are unconvincing and, more significantly, legally insufficient to support the petitioner's post-conviction seek for relief because they lack any kind of confirmation.”¹³⁰

The Supreme Court of India in a case, i.e. *People's Union for Civil Liberties v. Union of India*,¹³¹ observed that the narco-analysis test amount to infringement of human rights and right to life under Article 21 of the Constitution.¹³² Subjecting persons to injections of mind altering chemicals against their will is a violation of their right to privacy and may even if the drugs are not properly administered be dangerous for the health of the suspects.

Also the test directly intrudes into the mental process of the subject, who takes control over the questioning and his answers. There is a risk that the unconscious mind may

¹²⁸105 P. 3d 832 (2005).

¹²⁹*Ibid.*

¹³⁰*Ibid.*

¹³¹AIR 1997 SC 568.

¹³²Article 21 – No person shall be deprive of his life and personal liberty except according to the procedure established by law.

reveal personal information which is irrelevant to the investigation though highly embarrassing or even damaging to the subject, his family or to his livelihood. It is therefore imperative to establish standards of confidentiality and other safeguards as an individual privacy may be violated by the state only by procedure established by law.

But in *Bhagwan Singh v. State of Punjab*¹³³ Supreme Court observed that during interrogation use of some scientific principles must be made use of rather than resorting to the physical torture.

Also the Bombay High Court in *Ramchandra Reddy v. State of Maharashtra*¹³⁴ upheld the legality of the use of P300 or Brain Mapping Test and the use of truth serum. The court upheld a special court order in Pune as allowing the special investigating team to conduct scientific tests on the accused in the fake stamp paper scam including the main accused Abdul KarimTelgi.

The verdict also states that the evidence produced under the effect of truth serum is also admissible. In the course of judgment a distinction was drawn between statement made before the police officer and testimony made under oath in court. The Judges, Justice Palshikar and Justice Kakode observed that, “the Lie Detection and Brain Mapping tests did not involve any statement being made under narco-analysis was not admissible in evidence during trial.” The judgment also held that these tests involve minimum bodily harm.

This view was also accepted by the Kerala High Court in *Rojo George v. Deputy Superintendent of Police*,¹³⁵ where petitioner filed a writ petition before Kerala High Court contending that CBI is harassing him and compelling him to undergo narco- analysis test at forensic laboratory though he has already undergone Polygraph Test and Brain Mapping examination.

¹³³AIR 1992 SC 1689.

¹³⁴2004 (1) Bom. C.R. (Cr.) 654.

¹³⁵(2006) (2) KLT 197.

Kerala High Court, after considering the submission made by the petitioner and the CBI, observed that if the scientific tests like polygraph, brain mapping and narco-analysis test etc. are not being used during the course of investigation the conventional method of questioning the accused may not yield any result.

The techniques used by the criminals for commission of crime are very sophisticated and modern. When such tests are conducted under strict supervision of experts, it can't be said that there is any violation of fundamental rights guaranteed to citizens of India, of course the possibility of side effects can't be ruled out in any case. Normally the forensic science laboratory will conduct the test strictly in accordance with procedure prescribed, therefore the relief sought for him in the petition can't be granted. Regarding bail of the accused during the investigation the Gujarat High Court in *Santokben Sharmanbhai Jadeja v. State of Gujarat*,¹³⁶ where a criminal complaint was filed against the petitioner and 3 unknown persons on 8.6.2007, at Junagarh 'B' Division Police Station for the offences punishable under Sections 212, 506(2) and 112 of the IPC, 1860.

In the FIR, filed against the petitioner and other 3 unknown persons allegedly on the basis of statement given by the sister of the accused Mohan Amir namely Savitaben, that it has come to the knowledge of the complainant Shri S.G. Raval, Police Inspector, Crime Branch, Junagarh that the petitioner has committed the offences of harbouring and concealing the accused as well as the criminal intimidation and abatement.

The learned Magistrate by order dated 10th June, 2007 accepted the application of taking the petitioner on police remand and the petitioner was taken on police remand upto 11.00 am on 13th June, 2007. It appears that after the completion of the period of the remand the investigating officer submitted an application for seeking further remand which came to be rejected by the learned Magistrate. After the petitioner was taken on police remand on 11.6.2007 the prosecuting agency gone an application to the court of learned Magistrate praying therein for taking the petitioner for performing Brain Mapping test as well as

¹³⁶(2007) Cr.L.J. 4566 (Guj.).

narco test on the petitioner. That the same was objected by the petitioner. However, the learned Magistrate after hearing the learned advocates appearing on the behalf of respective parties granted the application of the prosecuting by order dated 13th June, 2007 for taking the petitioner for Narco-analysis as well as Brain Mapping Test. It appears that being aggrieved by the said order the petitioner gave an application for staying the operating of the prosecution for taking the petitioner for Narco-analysis as well as Brain Mapping test and the learned Judge has stayed the operation of the order upto 26.6.2007.¹³⁷ It appears that the petitioner has preferred Revision Application before the learned Session Judge against the order passed by the learned Magistrate granting the application of the prosecution for taking the petition for tests, and it is reported that the said revision application is already heard and is kept for order on 30th June, 2007. Thereafter a application of the prosecution for taking the petitioner for Narco-analysis as well as Brain mapping test was allowed by the learned J.M. 1st Class, and by the said order postponed the hearing of the application for bail till narco-analysis test as well as brain mapping test on the petitioner. Aggrieved by this order the petitioner has approached this court by way of present application and the court held that the Brain Mapping and Narco-analysis test is part of the process of investigation and it learned judge is of opinion that investigation is not over in that case, he may refuse the bail or may not release the accused on bail.¹³⁸

Madras High Court also confirmed this view in *Dinesh Dalmia v. State*,¹³⁹ where the petitioner had been accused of misappropriation of a sum of Rs. 594.88 crore by selling 1,30,00,000/- unallotted unlisted shares of DSQ Software Limited. As the accused had not allegedly come forward with the truth, the scientific tests were reported by the investigating agency. The facts of the case were that the petitioner was arrested and produced before the Additional Chief Metropolitan Magistrate, Egmore, Chennai, on

¹³⁷*Id.* at p. 4567.

¹³⁸(2007) Cr.L.J. 4566 (Guj.).

¹³⁹(2006) Cr.L.J. 2401 (Mad.).

14.2.2006. The learned Additional Chief Metropolitan Magistrate was pleased to grant police custody from 14.2.2006 to 24.2.2006. The said police custody was extended till 27.2.2006 on the basis of the affidavit filed by the investigating officer. The accused thereafter surrendered to Judicial Custody on 27.2.2006.

The respondent police filed a petition seeking permission to conduct the polygraph, narco-analysis and brain mapping tests on the accused and to direct the Superintendent of Prisons, Central Jail, Chennai, to produce the accused before the forensic Science Laboratory, Bangalore on 7th and 8th March, 2006, to undergo such tests. In a criminal revision it was contended that the accused cannot be compelled to give evidence against him. The grant of police custody beyond 15 days is out of the purview of section 167 of the Code of Criminal Procedure. There is an intrusion in the constitutional right of the accused to be silent under Article 20(3) of the Constitution of India.

It was held by the High Court that such a course does not amount to testimonial compulsion. When there was a hue and cry from the public and the human right activists that the investigating sleuths adopt third degree methods to extract information from the accused, it is high time the investigating agency took recourse to scientific methods to investigation.

Further, regarding the examination of person who is not a accused, Supreme Court in *State of Andhra Pradesh v. Inapuri Padma*¹⁴⁰ while deciding a case where persons mentioned in the requisition were neither accused nor suspects in the crime, held that there is no need to obtain any permission from the court to undertake narco-analysis test, if they express no objection for undertaking such tests.

In cases where the witnesses are not willing to undergo the test then only it is required by the police to make an application to the court seeking permission for undertaking a test against such persons. The police are required to convince the court as to what are the

¹⁴⁰(2008) Cr.L.J. 3992.

circumstances that made the police to gain an impression that the persons proposed to be put to narco-analysis test, and the likelihood of knowing something about the commission of the offence. Since the respondents in this case were not accused or suspects in the crime, the question of putting the test of testimonial compulsion did not arise.

This controversy seems to have been settled by the Supreme Court in *Smt. Selvi v. State of Karnataka*,¹⁴¹ where the scientific validity of impugned techniques had been questioned and it was argued that their results are not entirely reliable.

The three judges' bench headed by the then Chief Justice of India K.G. Bala Krishnan, along with Justice R.V. Ravendran and Justice J.M. Panchal, discussed in detail the pros and cons of these lie detection tests.

In this case court recognized that the protective scope of Article 20(3) extends to the investigative stage in criminal cases and when read with the section 161(2) of the Code of Criminal Procedure, 1973 it protects accused person, suspects as well as witnesses who are examined during the examination. The test results can't be admitted in evidence if they have been obtained through the use of compulsion.¹⁴²

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. This Article 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 can't be categorized as material evidence.¹⁴³

The impugned techniques can't 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 expensive

¹⁴¹AIR 2010 SC 1974.

¹⁴²*Id.* at p. 2060.

¹⁴³*Ibid.*

interpretation is not feasible in light of the rule of 'ejusdem generis' and the consideration which govern the interpretation of statutes in relation to scientific advancements. Furthermore, placing reliance on the results gathered from these techniques comes into conflict with the 'right to fair trial'. The Court further observed that we do leave room for the voluntary administration of the impugned techniques in the context of criminal justice, provided that certain safeguards are in place.¹⁴⁴

Guidelines for administering a polygraph test on the accused were released by the National Human Rights Commission in 2000. The "Narco analysis technique" and the "Brain Electrical Activation Profile" tests should be conducted in accordance with these rules, and similar safety measures should be used. Below is a reproduction of the language of these rules:

1. Only with the accused's permission should lie-detector tests be conducted. The accused should be given the choice of participating in these tests.
2. If the accused agrees to take a lie detector test, he should have access to a lawyer and the police and his attorney should explain the psychological, physical, and legal ramifications of the test to him.
3. The consent needs to be officially recorded in front of a legal magistrate.
4. The individual who is alleged to have agreed should be properly represented by a lawyer during the hearing before a magistrate.
5. The person in question should also be informed during the hearing that the statement they make will not be considered a "confessional" statement to the magistrate but rather a statement to the police.
6. The Magistrate shall consider all the factors relating to the detention including the length of detention and the nature of the interrogation.

¹⁴⁴*Id.* at p. 2060.

7. An impartial organization must actually videotape the lie detector test while it is being administered, and a lawyer must be present.

8. The way in which the information was received must be documented in full medical and factual detail.

So, with this decision Supreme Court seems to have settled the controversy regarding the constitutionality of these tests.

4.3 D.N.A. TEST

Application of D.N.A. testing is now well established in developed countries. In India in several cases, judgments have been given either based on the results of D.N.A. testing alone or along with other corroborative evidence.¹⁴⁵ But the approach of the courts towards the D.N.A. testing and its application in fact finding is very guarded one.¹⁴⁶

The courts are very cautious in allowing this test as they think that it may go against the basic principles of Human Rights, as the order for such tests may interfere with the personal liberty of that person guaranteed under Article 21, and from protection guaranteed under Article 20(3).¹⁴⁷

The first criminal conviction based on D.N.A. testing was done in 1986 in U.S. in the case of *Florida v. Andrews*. In *Andrews v. State*,¹⁴⁸ the trial court admitted the evidence and the jury convicted the defendant of aggravated battery, sexual battery and armed burglary of a dwelling.

In India from 1990 onwards many cases came into the various High Courts and the Supreme Court challenging the validity of D.N.A. tests. In the case of *Neeraj Sharma v.*

¹⁴⁵Abhijeet Sharma, "D.N.A. Fingerprinting: A Legal Prospective", *Cr.L.J.*, May 2004, p. 144.

¹⁴⁶Namrata Shrey, "Role of Medical Science in Criminal Administration", *Cr.L.J.*, Sep. 2006, p. 83.

¹⁴⁷Article 20(3) "No person accused of any offence shall be compelled to be a witness against himself.

¹⁴⁸Quoted from Parnam Kumar Raut, "DNA Test a Forensic Boon", *Cr.L.J.*, Nov. 2003, p. 349.

*State of U.P.*¹⁴⁹ where Dr. P.S. Negi, Chief Medical Officer, Haridwar was murdered and when inquest was held on his body some hair were found in his hands. The hairs were sealed in a packet by the investigating officer. During the investigation it was revealed that at the time of the incident a scuffle had ensued between the deceased and the assailant and in the course of said scuffle the deceased had caught the assailant by holding the hair of his head and the some have come in his hand when the assailant got himself released from the grip of the deceased and ran away from the spot. The sealed packet containing the hair was immediately kept in safe custody in the Malkhana. The prosecution moved an application before the C.J.M. Haridwar praying that samples of hairs of accused Neeraj Sharma and Rajeev alias Raju may be taken for getting the same compared with the hair which were found in hands of the deceased at the time of the inquest. This application was opposed by the accused on the ground that there is no provision in law which may empower any Magistrate to issue a direction for taking samples of hairs of the accused against his wishes and further the taking of hairs would violate Article 20(3) of the Constitution. Learned C.J.M. Haridwar has by the impugned order dated 28.6.1991, allowed the application moved by the prosecution and has directed that samples of hair of the accused may be taken. Aggrieved accused has filled the present revision. Deciding this revision petition the Allahabad High Court held that:

“the evidence of specimen handwriting, fingerprints and blood or hair will incriminate an accused only if on comparison with certain other handwriting, fingerprints, blood or samples of hairs, identity between the two sets is established. By themselves they do not incriminate an accused. Again, by themselves they are of no assistance at all to establish the charge against an accused.

¹⁴⁹(1993) Cr.L.J. 2266 All.

It is almost impossible for accused to change his blood or nature of his hair or ridges of his finger impression. Thus, by giving samples of hairs an accused does not become a witness against himself.”¹⁵⁰

In another case of *Chandan Pana Lal Jaiswal v. State of Gujarat*,¹⁵¹ Gujarat High Court while deciding revision petition where it is prayed on the part of petitioners that the order under challenge may be quashed and alternatively it is prayed that the petitioners may be permitted to engage D.N.A. Forensic examiners of their own choice and the investigating agency may be directed to see that the team DFS as well as the team DNA Forensic examiners engaged by the petitioners jointly conduct the DNA Fingerprinting test.

Both the petitioners, according to the case of the prosecution, are the original accused of the said offence punishable under sections 376, 342, 338, 234, 323 read with section 114 of the Indian Penal Code, 1860 and section 66(1) (b) and section 85 of Bombay Prohibition Act. It is prayed by both the petitioners that the order under challenge, granting both the applications preferred by the investigating officers, Assistant Commissioner of Police, DF Division, Ahmedabad City, may be quashed. Alternatively, it is prayed that the petitioners may be permitted to engage DNA Forensic Examiners of their own choice and the investigating agency may be directed to see that the team DFS as well as team at DNA forensic examiners engaged by the petitioners jointly conduct the DNA Fingerprinting test. The petitioners have also prayed one more alternative relief that at the time of the sample of blood for the purpose of conducting DNA fingerprinting test, the DNA examiners engaged by the petitioners may be permitted to collect the sample of the blood at the same time for the purpose of taking DNA fingerprinting test and to give their independent opinion about their findings.

In this case Gujarat High Court while dismissing the petition held that “accused can’t be permitted to put his own expert either to participate in such investigation or to watch such

¹⁵⁰*Id.* at p. 2274.

¹⁵¹(2004) Cr.L.J. 2992 (Guj.).

investigation as it may prejudice defense or prosecution because it would amount to interference in process of investigation. But the court issues following directions for examination:

- (1) The authorities should see that blood samples are collected by the responsible medical officer preferably in the jail ward itself.
- (2) If required the accused should be taken to the civil hospital and the blood samples should be drawn by a responsible doctor.

In another case of *Vishal Motising Vasva v. State of Gujarat*¹⁵² where earlier DNA of the accused was undertaken and it has been stated that the DNA Test as found to be in negative. When the evidence is recorded, it is the case of original complainant that she came to know at a later point of time that DNA test is already undertaken of the accused and therefore she moves an application before the trial judge for conducting the second D.N.A. Test of the accused. In this case it was held by the court that the order allowing application allowing second DNA test to be conducted can't be said to be without jurisdiction or illegal. However, order for conducting such test at particular laboratory, on request of complainant, would be illegal.

As towards the usefulness of DNA Orissa High Court in *Thogorani v. State of Orissa*,¹⁵³ observed that DNA Evidence is now a pre dominant forensic technique for identifying criminal. DNA testing on samples such as saliva, skin, blood, hair or semen not only helps to convict but also serves to exonerate.

High Court also held that the court must have sufficient materials before it to enable it to exercise its discretion. The only restriction according to us for issuing a direction to collect the blood sample of the accused for conducting DNA test would be that before passing such a direction, the court should balance the public interest vis-à-vis the right

¹⁵²(2004) Cr.L.J. 3086 (Guj.).

¹⁵³(2004) Cr.L.J. 4003 (Orissa).

under Article 20(3) and 21 of Constitution. In balancing this interest, consideration of the following matters would be relevant:

- (a) The extent to which the accused may have participated in the commission of the crime.
- (b) The gravity of the offence and the circumstances in which it is committed.
- (c) Age, physical and mental health of the accused to the extent they are known.
- (d) Whether there is less intrusive and practical way of collecting evidence tending to confirm or disprove the involvement of the accused in the crime exist or not.

In *Sanjeev Nanda v. State of NCT of Delhi*,¹⁵⁴ Delhi High Court also observed that an accused can be asked to give blood sample by the court.

In recent landmark case of *Patangi Balarama Venkata Ganesh v. State of Andhra Pradesh*,¹⁵⁵ Supreme Court while deciding an appeal from Andhra Pradesh High Court, where a pink color shirt was seized from the abandoned car. The blood stains on the shirt were found to be matching with the blood of the accused.

The facts of this case are that Subbarama Reddy was the member of the Parliament from Ongole constituency in the State of Andhra Pradesh. He had a gunman, named Ch. Venkataratnam. Subbarama Reddy was a philanthropist. He established 24 colleges in the Prakasm and Nellore districts of Andhra Pradesh. He otherwise donated a huge amount to a number of institutions. He was a resident of Bhagyanagar in the town of Ongole.

Subbarama Reddy reached Ongole on 1st December 1995. He went to a place known as Markapur on the same date to attend a function. He was to attend two more functions in the afternoon in the town at Ongole. P.W. 2 and 3 came to invite him to attend the function to be held at Islampet in the town of Ongole. While he was in his bedroom,

¹⁵⁴(2007) Cr.L.J. 3786 (Del.).

¹⁵⁵(2009) Cr.L.J. 4144.

P.W.S. 1 and 3 went inside the bedroom and at the same time PW 13 also went inside the room. Ch. Venkataranam, gun man, was standing outside the door. While all of them coming out from the bedroom of Subbarama Reddy, PW 1 found five persons having pistols standing there. Patangi BalaramaVenkata Ganesh, A-1 was said to be having a gun in his hand. The assailants fired at Subbarama Reddy and his gunman A-1 was identified as a person wearing pink coloured shirt. The gunman allegedly fired a shot. Pursuant thereto appellant sustained bullet injuries. They escaped in a white ambassador car.

Accused No. 1 was arrested on the same day from the cashew garden with bullet injury in his stomach. He was arrested and sent to hospital for his treatment. Subbarama Reddy died at 1600 hours while his gunman Ch. Venkataratnam died at 1800 hours on the same dated i.e. 1stDecember 1995. Initially, eight persons were made accused. Two of them are said to have died. For having absconded could not be put on trial.

Both the accused were found to be guilty by the trial judge. Accused no. 1 was sentenced to life imprisonment for the offences under sections 302, 120-B as also 149 of Indian Penal Code and section 27(2) of the Arms Act. He was also sentenced to undergo rigorous imprisonment for one year for the offence under section 147 of I.P.C; rigorous imprisonment for two years each for the offences under section 148 and 506 of the Indian Penal Code; rigorous imprisonment for seven years for the offences under Section 397 of the IPC and rigorous imprisonment of five years for the offence punishable under section 25(1A) of the Arms Act.

The defense submitted that the report of the DNA should not be relied upon. Supreme Court held in this case that using this genetic fingerprinting is done like in the traditional method of identifying fingerprints of the offenders. The identification is hundred percent precise, experts opine.

The court also held that in the report of DNA expert failure to use the expression ‘similar’ not ‘identical’ not material when conviction was not based only on expert evidence.

Supreme Court in another recent judgment while deciding the constitutional validity of certain forensic tests in *Selvi v. State of Karnataka*¹⁵⁶ held regarding the constitutional validity of DNA that “A DNA profile is a record created on the basis of DNA samples made available to forensic experts. The matching of DNA samples is emerging as vital tool for linking suspects to specific criminal acts. The use of material samples such as fingerprints for the purpose of comparison and identification does not amount to a testimonial act for the purpose of Article 20(3).

4.4 FINGERPRINTS

Of all methods at personal identification known to date, fingerprints offer the most successful means of identifying a person. It is today used as an infallible means of identification, all over the world.¹⁵⁷ The method possesses all the major qualities of an effective identification such as uniqueness, permanence, universality, simplicity of recording and simplicity of classification.¹⁵⁸

In many cases before the Supreme Court and various High Courts, use of fingerprints as a tool during investigations has been challenged. Initially Madras High Court in the case of *Palani Gowndan in re.*¹⁵⁹ observed that when the evidence sought was to be obtained by a volitional act of the accused, the accused could not be compelled to perform the act but when the evidence could be taken by the police under a provision of law, as taking impression of his fingers or photograph of his face or other measurement of his body, which do not depend upon the volition act of the accused, the protection given by Article

¹⁵⁶AIR 2010 SC 1974, 1978.

¹⁵⁷B.S. Nabar, *Forensic Science in Crime Investigation*, 2008, p. 47.

¹⁵⁸*Ibid.*

¹⁵⁹AIR 1957 Mad 546.

20(3) of the Constitution is not contravened and the police take such material even by the exercise of force.

But this view has not accepted by the Allahabad High Court in the case of *Balraj Bhalla v. Shri Ramesh Chandra Nigam*.¹⁶⁰ And held that the recording of fingerprints was the only purpose of record of the accused can be denied by the accused, as that would be violative of Article 20(3).

Further in very important case of *State of Bombay v. Kathi Kalu Oghad*,¹⁶¹ where three appeals have been heard together only in so far as they involved substantial question of law as to the interpretation of the constitution, with particular reference to clause (3) of Article 20.

The facts of this case are that the respondents was charged, another person, under Section 302 read with section 34 of IPC as also under section 19(e) of the Indian Arms Act. The trial court found him guilty of those charges and sentenced him to imprisonment for life for the offence under Arms Act. At the trial the identification of the respondents, as one of the two alleged culprits, was the most important question to be decided by the court. Besides other evidences the prosecuting adduced in evidence a chit – Ex.5 alleged to be in his handwriting and said to have been given by him. In order to prove that Ex. 5 was in the handwriting of the respondent, the police had obtained from him during the investigation, three specimen handwritings of his on three separate papers which were marked as Exs. 27, 28 and 29 by the handwriting expert whose evidence was to the effect that they are all writings by the same person. At the trial and in the High Court, the question was raised as to the admissibility of specimen writings contained in Exs. 27, 28 and 29, in view at the provisions of Article 20(3) of the Constitution.

The Supreme Court observed that it is an admitted fact that those specimen writings of the accused had been taken by the police while he was in the police custody, but it was

¹⁶⁰AIR 1960 All 157.

¹⁶¹AIR 1961 SC 1808.

disputed whether the accused had been compelled to give those writings within the meaning of Article 20(3) of the Constitution. The plea of the accused that he was forced by the Deputy Superintendent of Police to give those writings has not been accepted by the trial judge. But those documents have been excluded from the consideration, as inadmissible on the ground that though there was no threat or force used by the police in obtaining those writings from the accused person, yet in the view of the court “the element of compulsion was implicit in his being at that time in police custody.” In this conclusion both trial Judge and the High Court have agreed. The identification of the accused person was also sought to be proved by the evidences of witnesses, who identified him at the identification parade.

The High Court giving benefit of doubt to the accused acquitted him. The State of Bombay moved Supreme Court and obtained special leave to appeal from the judgment and order of acquittal.

The other two appeals, criminal appeals 110 and 111 of 1958 deals in identical situation where the facts relate to the comparison of the fingerprints.

The Supreme Court observed that giving thumb impressions or impressions of foot or palm or fingers cannot be included in the expression ‘to be a witness’ and held that “there is no infringement of Article 20(3) of right against self incrimination by compelling an accused to give impression of his fingers for the purpose of comparison under the provision of section 73 of the Indian Evidence Act, 1872.”

The court may also direct any person present in the court to make a finger impression for the purpose of enabling the court to compare the impression so made with any impression alleged to be the finger impression of such person.¹⁶² The court may draw adverse inference from a refusal to give thumb impression.¹⁶³

¹⁶²*State v. Parameswaran Pillai*, AIR 1952 TC 447.

¹⁶³*Ibid.*

4.5 CONCLUSION

According to Roscoe Pound the flexibility is the greatest virtue of law and thus its applicability should also be flexible rather than a rigid insistence of strict format. Moreover, law is not static but it is dynamic. Hence, it should keep changing according to the requirement and changes in the society, science, ethics and technology. The legal system should absorb development and advances that take place in science as long as they are for the good of the society and they do not violate fundamental legal principles.

CHAPTER FIVE

CONCLUSION AND SUGGESTIONS

5.1 CONCLUSION

Scientific developments have made the modern investigations more eminent in terms of results and therefore established the irrevocable need for such. The revolution of scientific technology is waving like fast flowing air in the modern world of advancement. The field of law is also under the shadow of scientific advancement. Judicial system, particularly the criminal justice system, is not untouched with the advancement of science.¹⁶⁴ Regarding this forensic science has a paramount role in the detection of crime. It can be defined as a science, by means of which material evidence is collected, analyzed, presented and used in a court of law especially in relation to crimes. It embraces all branches of science and applies them to the problems of law. Though its techniques are borrowed from various scientific disciplines, like chemistry, medicine, surgery, biology, photography, physics and mathematics but over the years, it has developed its own branches like Anthropology, D.N.A., Fingerprinting, Fingerprint Odontology etc.

In the 20th century, Forensic science tests, such as lie detection tests, DNA Fingerprinting and Fingerprint comparison tests has revolutionize the modern investigation system. Lie detection tests include three types of tests. Firstly, narco-analysis test, which involves the intravenous administration of drug that causes the subject to enter into hypnotic trance and becomes 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, high quantities for which are routinely used for inducing general

¹⁶⁴Rattan Singh, "Narcoanalysis: A Volcano in Criminal Investigation System", *Cr.L.J.*, June 2010, p. 169.

anesthesia in surgical procedure. This test is a scientific procedure to obtain information from an accused in a natural sleep-like stage.¹⁶⁵

The second test is polygraph test. The polygraph works on the principle that change in the person's perception or consciously held feelings produces a defense reaction in the form of psychological changes i.e. in the pulse rate, blood pressure, respiration rate and electrical resistance at the skin, known as G.S.R.¹⁶⁶

During the polygraph test a corrugated rubber tube, tied around the subject's chest, measures respiratory changes, and inflated cuff wrapped round the upper arm, which measures the cardio vascular changes; electrodes attached to the palm or fingers, measures the electro dermal response; and the transduct attached to the thumb measures blood volume reflecting the pulse rate.

A baseline is established by asking questions whose answers the investigators know. Lying by a suspect is accompanied by specific, perceptible, psychological and behavioural changes and the sensors and a wave pattern in the graph expose this. Deviation from the baseline is taken as sign at lie.¹⁶⁷

The third lie detection tests is brain fingerprinting. It is based on the principle that when the brain recognizes a person or a sound, it generates a particular type of electrical wave and this wave is called P300 or Brain Mapping. Waves are generally reflected when the person has some connection with those pictures or sounds. The entire system is controlled by a computer. If the stimulus gives a positive response, it is considered that the accused has some liaison with the incident.

The second forensic science tests id DNA Fingerprinting. DNA stands for Deoxyribonucleic Acid. It is the biological blueprint of life. DNA Fingerprinting is

¹⁶⁵B.R. Sharma, *Forensic Science in Criminal Investigation and Trials* 17 (Universal Law Publishing, New Delhi, 1999).

¹⁶⁶B.S. Nabar, *Forensic Science in Crime Investigation* 341 (Asia Law House, Hyderabad 2008).

¹⁶⁷Ekta Gupta, "Lie Detector Test – A Global Perspective", *Cr.L.J.*, Aug. 2006, p.180.

applicable to virtually all body materials, are encountered in a variety of heinous crimes, murders, dacoities, encounter and other body offences against the person.

The third type of forensic science tests is fingerprints comparison test. Fingerprint offers the most successful means of identifying a person. It is today used as an infallible means of identification, all over the world. This method possesses all the major qualities of an effective identification medium, such as uniqueness, permanence, universally, simplicity of recording and simplicity of classification.¹⁶⁸There was considerable debate about the constitutional validity and the accuracy of these forensic science tests.

Regarding the constitutional validity of lie detection tests, Supreme Court in a landmark judgment, *Selvi v. State of Karnataka*,¹⁶⁹ held that:

“Protection against self-incrimination is a broad protection that extends to the stage of investigation. While there is a requirement of formal accusation for a person to invoke Article 20(3) it must be noted that protection contemplated by Section 161(2) CrPC. is wider. Therefore, the right against self-incrimination protects persons who have been formally accused as well as those who are examined as suspects in criminal cases.”¹⁷⁰

The court further observed that, “The compulsory administration of the impugned tests (Narco-analysis, polygraph and brain fingerprinting tests) violates the right against self-incrimination. This is because the underlying rationale of the said right is to ensure the reliability as well as the voluntariness of statements that are admitted as evidence. Thus, court has recognize 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 CrPC., it protects accused persons, suspects as well as witnesses who are examined during an investigation. The tests results can’t 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

¹⁶⁸*Supra* note 3 at p. 48.

¹⁶⁹Air 2010 SC 1974.

¹⁷⁰*Id.* at p. 1975.

remaining silent, irrespective whether the subsequent testimony proves to be inculpatory or exculpatory.”¹⁷¹

In the light of these conclusions Supreme Court observed that no individual should be forcibly subjected to any of the techniques, in question, whether in context of investigation in criminal cases or otherwise. Doing so would amount to an unwarranted intrusion into personal liberty. However, Supreme Court leaves room for the voluntary administration of the impugned techniques in the context of criminal justice, provided that certain safeguards are in place.

The Supreme Court in this case of *Selvi v. State of Karnataka*,¹⁷² while settling the controversy regarding the validity of DNA Fingerprinting also held that:¹⁷³

“The matching of DNA sample is emerging as a vital tool for linking suspects to specific criminal acts. The use of material samples such as fingerprints for the purpose of comparison and investigation does not amount to testimonial for the purpose of Article 20(3) of the Constitution.”

Further, regarding the constitutional validity of fingerprint comparison, Supreme Court settled this controversy in the case of *State of Bombay v. Kath iKalu Oghad*,¹⁷⁴ where Supreme Court observed that:

“Giving thumb impression or impression of foot or palm or fingers or specimen writing or showing parts of body by way of identification is not included in the expression to be a witness.”

According to Roscoe Pound the flexibility is the greatest virtue of law and thus its applicability should also be flexible rather than a rigid insistence of strict format.

¹⁷¹*Selvi v. State of Karnataka*, AIR 1974 (1975).

¹⁷²AIR 2010 SC 1974.

¹⁷³*Id.* at p. 1976.

¹⁷⁴AIR 1961 SC 1808.

Moreover, law is not static but it is dynamic. Hence, it should keep changing according to the requirement and changes in the society, science, ethnics and technology. The legal system should absorb development and advances that take place in science as long as they are for the good of the society and they do not violate fundamental legal principles.

Forensic science encompasses a broad field of scientific knowledge in pursuit of crime and criminal forensic science has now established firm roots in India in the administration of criminal justice system. We, today, have a well organized network of laboratories, fully equipped with the most modern equipment's and trained manpower to handle it. Unfortunately, in spite of all around developments in forensic science, many police officers still seem to be unaware of the developments and the facilities offered by forensic science, which modern criminals are making the full use of science to commit crimes.

In such a scenario, it is absolutely necessary for the law enforcement agencies to acquire necessary skills and scientific technique to utilize the facilities offered by the rapidly developing forensic science to meet the challenges of crime and criminals. Consequently, there has to be an increasing emphasis on the thorough training of the police personnel in the application of forensic science. No longer crime investigation can be based on the intuition or sixth sense of a police officer. Short courses in forensic science need to be organized on a regular basis orientation course in forensic science for all levels of police officers, particularly those engaged in crime investigation, should be conducted.

In Indian scenario, there has been increased emphasis on the use of such technologies in criminal investigation and trials. The Commissions appointed on reforms of criminal justice have reiterated that the infusion of technology in crime detection can help the system to function efficiently. The relevant laws have been amended from time to time to make way for use of forensic technologies in crime investigation and trial. Yet, it may be said that there are existent flaws in the laws which need to be addressed. The courts are

also reluctant to rely on scientific evidence due to their restrictive approach, or certain inherent defects in the evidence as produced in courts which deter them from relying on it entirely. The main motto of criminal justice system is to provide fair justice. Undoubtedly, forensic evidence is more authentic than ocular evidence. Forensic science being scientific evidence is a boon for criminal justice system. We have to overcome the existing flaws to step forward

We must learn from the past, disrupt our thinking, strengthen the community and change our culture. This means working together towards a resolution of the scientific deficiencies within existing forensic evidence while providing a firm basis for new innovative technologies entering into the forensic science ecosystem. At the same time, we need to ensure that the law enforcement and investigative communities once again recognize and use forensic science to its full potential as a holistic problem-solving tool (for example, through the use of the case assessment and interpretation methodology) . That such a methodology is embedded within a framework which allows for an understanding of the contribution that a specific evidence type could meaningfully deliver in terms of sub-source, source, activity or offence-level propositions for a given set of case specific circumstances rather than restricting it to a siloed one-dimensional reactive process becomes obvious. A contextualized means of evaluative reporting of forensic science data pertinent to a particular case but held in the context of that case where alternative propositions can be attended to and challenged correctly, works to fulfil this problem-solving potential. Such an approach has been suggested by the Association of Forensic Science Providers among others.

5.2 SUGGESTIONS

Following suggestions can be helpful in the better implementation of the various types of forensic science tests and also can be helpful to provide the protection to accused from infringement of his fundamental rights:

- (1) For an enlightened and powerful criminal justice system there should be an abrupt use of the application of forensic science in the crime investigation process. For achieving this end, there should be growing awareness of forensic science all over India. Forensic science should be embedded first amongst the common man, police personnel, and judges, lawyers, for large forensic awareness, forensic science should be introduced to a certain extent in the school syllabus at the secondary schools or an additional paper may be created for this purpose. Forensic science should be introduced in the LL.B. syllabus, so that the matter may be earlier known to them. Forensic awareness in the judiciary in India is poor. As there is abrupt use of forensic science in the courts, the judges, the lawyers, the prosecutors and the investigating officers of the police station must be well-trained in forensic science.
- (2) For the purpose of carrying on an enlightened crime investigating process, a specific forensic legislation is to be immediately enacted all over India. The existing laws of our country are not sufficient for that purpose. For the purpose of DNA analysis of the body fluids of the suspects who have committed crimes, there should be specific forensic legislation in India, so that the investigating officers are legally entitled to collect all sorts of sample body fluids from the body of the suspects for the purpose of investigation of crimes.
- (3) There should be strict enforcement of the guidelines as given by the Supreme Court regarding lie detection tests and DNA fingerprinting.
- (4) If the court is apprehensive of irregularities in obtaining blood samples or other samples, safeguards must be provided by the

court by providing that these samples would be taken in presence of courts.

- (5) State governments need to work with the central authorities to enhance the investigative capabilities of their police departments. The Indian Criminal justice system has an alarmingly low conviction rate and the situation needs to be rectified with emphasis on real science and state of the art technology. There is also an immediate need for a comprehensive training of investigating officers with special reference to modern and scientific tools of investigation for effective administration of criminal justice system.
- (6) Psychology and law have a great deal in common. The research in forensic psychology can be highly useful in the outcome of legal proceeding. The areas such as eye witness testimony, prediction of dangerousness, credibility of child testimony, provocation and lie detection, the forensic psychology can play a major role. Forensic psychology can also be helpful in the development of procedures in interviewing suspects and the admissibility of the expert testimony on whether a witness is suggestible.
- (7) Lack of fund is also another factor that affects the quality of work of forensic science done in this country. The Central Forensic Science Laboratory (CFSL) is under the Ministry of Home Affairs and as such approval of the every project they require permission of Delhi. This permission usually takes 2 to 3 years so come. By that time the project would have become obsolete and the researcher would have lost interest. So incentive must be given quickly to the bright people to keep them in this field.

- (8) Another step is to give the forensic science laboratories the status of an autonomous scientific establishment that brings at par with other scientific organization like DRDO and CSIR.
- (9) The Criminal Procedure Code, 1973 and Indian Evidence Act, 1892, should be amended to make it mandatory for the forensic scientists to visit the scene of the crime to collect such clue materials as blood stains on clothes etc.

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