

Use of Scientific Procedure in the Indian Criminal Justice System for Investigation: Study with Special Reference to DNA Profiling, Narco-Analysis and Polygraph Test

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Introduction

Crime is inevitable in any society and is as old as the human civilization itself. Social norms were basically set up for identifying the acts of the people, if they were to live together. The obvious aim was to identify those people who do not follow the set norms, to punish them and segregate them from the mainstream thus keeping the society free from the menace of criminality. This gave rise to the process of finding out and inquiring the offence and management of illegal affairs, which, in turn, led to the establishment of institutions for the investigation as well as prosecution, thereby imparting fair and unbiased justice. Initially, the criminal justice delivery system heavily depended on the testimony of eyewitnesses to the crime. But the sole dependence on "eyewitness" did not prove very effective, as more often than not, they were found to turn hostile, due to the threat of life or lure of money. Hence it lacked proper consistency and coherency apart from the proper want of relevant testimony which was in fact a big hurdle to the justice system. The crime investigators then allegedly resorted to the "third-degree methods" for interrogation of the suspects to bring out the truth, either by hook or by crook. They were considered inhuman, as many innocent people suffered, both physically and psychologically. Also the recent improvement in the field of Scientific and technological innovations, easy access to technological knowledge, smooth communication system and good transport facilities have transformed the shape of the society and modus operandi of the commission of modern day sophisticated crimes.

In India where a significant mass of population is still uneducated and the social setup is heterogeneous, the existence of strained police- public relation, lengthy and complicated procedural wrangles, rampant poverty and mass unemployment, the heavy role of money and muscle power, the primary witnesses often turns hostile, for one reason or the others, thus resulting in the weakening of the prosecution case consequently the benefit of doubts goes to the accused. This has posed a serious challenge to the effective criminal justice system in India.

However it has been realized that the modern scientific techniques could perhaps provide quick solutions to a large number of problems of human beings in the process of crime investigation. Thus for the investigation of such crimes and bringing the culprits to book through the criminal process, it became all the more essential to prove that a crime has been committed and also to bring forth adequate evidences in support of the modus operandi in which the crime has been actually committed and the culprit involved

therein. The process of crime detection and gathering the proof with the view to penalize the blameworthy as well as protecting the blameless had been a complex task performed by the law enforcement agencies.

Hence the detailed analysis regarding the nature and scope of these new emerging techniques of science of DNA profiling, Narco- Analysis test, Polygraph test and its admissibility shall be undertaken by the humble researcher during the study.

Statement of Problem

With the advent of modern times, when scientific and technological advances started playing a pivotal role in practically all walks of life, the methods of using the knowledge relating to the various science disciplines in crime investigation work also came to be discovered. Over the years, the application of scientific methods in the inquiry of the crime has developed into a full fledged field of specialization. Science plays an extremely significant role in the investigation of various types of crimes. Science is not only an essential tool to examine the scene of occurrence and crime exhibition in the Laboratory but also contributes a significant part in the deposition of the expert evidence in the courts of Law in our Criminal Justice System.

A Scientist might be exceptionally good in his field for analyzing/examining the criminal cases, but may be lacking sufficient experience for the effective deposition as an expert witness and to put forth the convincing reasons in order to arrive at the final conclusion in a methodical manner. Therefore, Science establishes the distinctiveness of the offender through individual clues like fingerprint, footprints, semen, blood drops or hairs etc.

Therefore the responsibility of the chemist/scientist is not only confined to the outputs of his experiment/examination of physical evidences or its related reports, but also to defend himself successfully in the court of law. He is one of the strongest assets of the prosecution who comes forward to tell the real facts on the scientific findings against the criminal without any fear.

Life on the earth is based on cells, almost every cell has a nucleus, and each nucleus carries a complete set of chromosomes. Human beings have 23 pairs of chromosomes which carry linearly arranged genetics unit, which are materially referred as Deoxyribonucleic Acid commonly known as DNA. DNA is the genetic material that makes every individual different except for genetically identical twins.

The detection of Deoxyribonucleic Acid or DNA, the decoding of its structure and the deciphering of its heritable information were the revolving points in our understanding of the underlying concepts of inheritance. Now, with the incredible speed as molecular biologists are unravelling the basic structure of genes, we are able to create new products through genetic engineering and develop diagnostic tools and proper treatments for genetic disorders. Till recently these developments were of seemingly peripheral interest to the scientists. All that changed when, in 1985, what progressed out as a more or less usual investigation into the structure of a human gene which led to the discovery of that portion of the DNA structure of certain genes which are as distinctive to each human being as fingerprints. Alec Jeffreys and

his colleagues at Leicester University of England, who were answerable for these revelations, named the process for isolating and reading these DNA markers as "DNA fingerprinting." The later on scientists and researchers unravelled new approaches and differences to the original Jeffreys technique, the term DNA typing has come to be applied to describe this new technology. This finding caught the imagination of the community, for it has long been the objective of scientists to connect with certainty the origin of crucial biological evidences such as blood, semen, hair, or tissue to a single individual. Even though the conventional testing procedures have gone a long way in narrowing the source of biological materials, individualization remains an elusive goal. Now DNA typing has brought science to the brink of this goal. In the few years since its introduction, DNA typing has become an integral part in many public crime laboratories and has been made available to the interested parties through the services of a number of skilled private laboratories. Courts in India have overpoweringly accepted the DNA proof and acknowledged the trustworthiness of its scientific fortification in the United States.

DNA Testing plays a very significant role in the process of crime investigation in the contemporary era. A great diversity of criminal detection has benefited from DNA testing and it has been especially valuable in solving the sensational cases of rapes and murders cases. Other examples are of robbery, assault, kidnapping, car-accident, extortion, and blackmailing. It has been also successfully applied to the determination of paternity and useful in setting certain immigration disputes that hinge on the family relationships.

In any criminal inquiry, interrogation of the accused plays a vital function in extorting the truth from them. The agencies investigating the accused are of the view that every crime takes place in a person's mind before they are conceded out, so by investigating or studying the mind of an accused with or without consent, would render a great help in the investigation process. With the innovation of science and technology, complicated methods of 'lie detection' have been developed which do away with the use of third degree torture methods by the police. The other scientific methods of interrogation namely The Polygraph Test, The Brain Mapping Test and The Narco-Analysis or the Truth Serum Test are the three major tests that have recently been developed for extracting confessions from the mouth of the alleged suspects. These psychoanalytical tests are also used to interpret the behaviour of the criminal and corroborate the investigating officers' observations. Stephen Horseley introduced the term 'Narco-Analysis' in 1936 which is a combination of hypnosis and narcosis. In this technique, the use of narcotics is made to induce a trance like state wherein the suspected person is subjected to various pertinent queries. The Narco-Analysis test is based on the principle that a person is able to lie using his imagination and under the influence of certain barbiturates, this capability for imagination is blocked or neutralized by leading the person into a semi-conscious state. It becomes difficult for the person to lie and his answers would be restricted to the facts he is aware of. The use of such drug in police investigation or interrogation is similar to the accepted psychiatric view of Narco-Analysis and the only difference in the two procedures is the difference in the objectives.

Law and Justice, its practice includes scientists of various disciplines, i.e. physicists, biologists, technologist, fire-arm experts, chemists, toxicologists, documents experts, and others. The phenomenon of crime is universal and inevitable and is multiplying enormously with the most sophisticated modus operandi of the criminals in the present era. Hence for the purpose of controlling them, the old techniques are proving quite ineffective, therefore there is a dire need of new technique to tackle such crimes effectively for the protection of humanity and smooth running of life.

Objective of the study

In the present study, the real & significance of scientific procedure with special reference to DNA testing, Narco- Analysis and polygraph test in India would be deeply analysed at length. The study is guided with three major objectives:

1. How the forensic science including DNA test, Narco- Analysis test and polygraph test are proving to be an effective tool in the process of crime investigation.
2. How the forensic scientists work intimately with the police and investigation officers, members of the legal profession before whom they eventually appear as independent expert witness in the process of solving the mystery of the crime and final dispensation of justice.
3. Lastly, what is the admissibility of the forensic science including DNA test, Narco- Analysis and Polygraph test in the law of the land and its effect on the mass.

Review of Literature

There are various books, research and articles, and reports authored by different eminent scholars which have been very helpful in the completion of the present research work.

Abhijeet Sharma, DNA Test Paternity Determination & Criminal Investigation, ed.2007

In this book, the writer seeks to analyse the importance of DNA profiling in the paternity disputes and the role of DNA profiling in the process of crime investigation has been also explained. At present time, DNA is an effective tool in solving the cases relating to paternity dispute, rape, murder, etc. The writer holds that DNA technique which is not only used in numerous areas of research in the modern molecular biology and genetics but also in finding its prospective applications in the day to day life. DNA of each person is unique. DNA can never change during the lifetime of a person. DNA evidence like fingerprint evidence offers important new tools for the identification and apprehension of some of the most violent perpetrators. At the same time, it also helps the innocent. It is also used to link the suspect to biological evidence. The writer has also analysed various techniques of DNA Profiling, like RFLP technique, PCR technique, STR technique etc.

B.S. Navras, Forensic Science in Criminal Investigation, 2007

In the present book, the author has aptly explained the significance of forensic science at present era. He has also explained that how forensic science plays a commendable role in solving crime and how it is useful for investigating authorities in order to reach the logical conclusion. Since the methods of committing crimes have been changed, there is dire need to learn the methods of gathering evidence for forensic science investigation authorities. With the help of the scientific evidence a clue can be traced which the criminal leaves behind after committing the crime.

Deepak Ratan & Mohd. H. Zaidi, Forensic Science in India & the World, 2008

In this book, the author's attempt is to bring together the various scientific and legal aspects in the application of forensic science. The writer has discussed about the legal and ethical issues in forensic science for the administration of Criminal Justice. DNA fingerprinting, Brain Mapping, Polygraph test, Cyber technology, Questioned document analysis, Medico-legal analysis, Forensic Ballistic etc has been duely discussed by the author. Nowadays with the advancement of science and technology, the authors are of the five views that the criminal have also adopted new methods and techniques for committing crimes. Simultaneously science has also helped the investigating authorities in their efforts to nab the criminals. The days of interrogation of criminals by using third degree methods are now giving way to new scientific methods of investigation. The forensic science is one of those modern methods used in identifying crimes and criminals. It is very challenging, charming, dynamics and exciting science.

Jyotirmoy Adhikari, DNA Technology in Administration of Justice, 2007

The modern day biology is seeking new and better ways to enhance our quality of life through the application of technology (Biotechnology) and rapid progress in research on human genome. The recent developing technique of DNA promises a greater degree of accuracy. DNA profiling has been used extensively for paternity testing as well as the criminal investigation. DNA profiling has particular application to the criminal law because of the possibility that it offers a chance of determining whether blood or semen deposits located at the scene of a crime come from a person suspected of having committed the crime. The great importance of the fast developing DNA technology and its impact on the right of an individual and its societal impact have creative and urgent need for getting acquainted with understanding the basics of modern genetic science for playing an effective role by all those who are concerned with justice delivery system. DNA technology plays a pivotal role not only in the identification of offender in criminal cases, but also in paternity dispute cases, baby exchanging cases, in several civil litigations like succession, maintenance, proceedings and matrimonial disputes etc.

DNA Technology is an important technique that allows the scientists to examine genetic material, which can especially be useful to the enforcement agencies in identifying the perpetrator when the crime are committed as all individual have unique pattern in their DNA. The book analyses various factors which has been explained by the writer and he has also discussed about significance of DNA Technology in Criminal Justice System.

Modi's Medical Jurisprudence & Toxicology, Ed.23, 2006

In this book, Modi has given due emphasis on the important of scientific evidence, which is an important branch of jurisprudence is Forensic Science. Forensic Science basically provides scientific study for the investigation of crime. It is a powerful controlling stick (weapon) in the armoury of government of fairness. The expansion, progress and use of Forensic Science in the detection of crime in developed countries is remarkable and growing with the new techniques. The procedure of Forensic Science is nothing but an application of the techniques and methods of basic science techniques for various analyses of the evidence associated with crimes. In this book it has been also explained by the author that presently forensic science has become an integral branch of science which plays vital role in the process of crime investigation.

Legal and ethical aspect of genetic engineering and various control mechanism by Dr.R.J.R.Kasibhatla (2011)

The value and significance of DNA technology has been discussed in the field of biotechnology and in legal field by the author of the article.

Legal issue in Forensic DNA by Susan Herrero (2003)

The author has succinctly discussed about significance and admissibility of DNA evidence in the criminal investigation. He has also discussed the model of DNA in the near future i.e. what will be the importance of DNA in future.

Narco-Analysis: A volcano in criminal investigation system by Rattan Singh, (2010)

The revolution in the scientific technology is waiving like fast flowing air and water in the modern world of advancement. The connection of law, science and technology has thrived to become a significant point for decision of many important issue such as scientific evidence, genetic and biological research, cloning and privacy of nervous system of person. In the present article, the author has explained the various scientific technique which are helpful in crime detection in solving various civil & criminal cases.

Narco-Analysis and the shifting paradigm of Article 20(3): a comment of Selvi v. State of Karnataka by Anjana Das and Arun Kumar, (2011)

In this article, the writer has analysed the Narco-analysis test with the help of the famous case of Selvi v. State of Karnataka. The aim of this article is to scrutinize the judgment at two levels: the right against self-incrimination and the right to life and personal liberty. The writer has also given concerning arguments in the favour of the test.

Narco-Analysis -Investigation tool or torture by Punia Rajesh, (2010)

With the advancement of forensic science and technology, major changes have been made in the investigation mechanism and Narco-Analysis test is one of them. In the beginning, Narco- Analysis test

were practices on war prisoner and alien .But with the change in society, science and technology it is now practiced more often without consideration the fundamental legal principles on which legal system exists.

Narco-Analysis test -Infringement of individual fundamental rights and its value as evidence by Caesar Roy (2011)

In this article the writer has aptly discussed the definition, procedure of Narco- Analysis test. Constitutional validity of the Narco-Analysis test has been also successfully discussed by the writer.

Protection of human rights by invoking compensatory jurisdiction by courts by M.S. Deshpande (2014)

Human rights are those rights which are inherent in every human being. In absence thereof human being are not in position to live as human being. In this article the author has explain the concept of human right in detail with the help of provision of Constitution of India. He has also discussed the role of court in protection of human right with the help of case laws.

The constitutional mandate on the right against self incrimination: A comparative study on the legitimacy of Narco-Analysis by Subhomoy sarkar (2009)

In the present article, the author explains the significance of Narco-Analysis test, position and legality of such tested comparing with the Indian and the US laws.

The truth about lies: Do lie-detectors work, by Dr.Subhas Chandra Singh (2010)

This article undertakes a close and critical look at the accuracy of the Lie Detector test.

On the basis of the review of the aforesaid literature the present research work is being carried out in order to appreciate the significance of the emerging techniques in the crime investigations and various scientific techniques like DNA Profiling, Narco- Analysis & Polygraph test.

Research Methodology

Legal research is a careful, diligent and studious inquiry or examination, especially the investigation or experiment which is aimed at the discovery and interpretation of facts, revision of accepted theories of laws in the light of new facts or practical application of such new or revised theories of law. Thus, it can be said that research is a vigilant enquiry or an analysis of the principles for unearthing of the new fact or a new interpretation of already existing fact or phenomenon. For the purpose of this research work, doctrinal methodology has been adopted. Thus, the study is based upon the vast number of related research and text books, journals, reports, case laws, articles, websites and other relevant materials to the concerned topic which have been collected from certain reputed libraries.

Apart from this, the researcher has also visited a large number of legal sites during course of the study. Throughout the research work a uniform mode of citation has been followed.

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