



# PROGRESS OF FORENSIC SCIENCE AND CRIMINAL PROSECUTION IN INDIA

**\* Dr Panchakshari Gouda B Patil \*\*Dr Theju Kumar C \*\*\*  
Dr Shivalingappa S Angadi**

\* Teaching Assistant, Department of Criminology & Forensic Science, Karnatak Science College, Dharwad.

\*\* Associate Professor, Dept of Criminology & Forensic Science, Acharya Institute of Graduate Studies,  
Affiliated to Bengaluru City University, Bengaluru

\*\*\*Teaching cum Research Officer(Criminology) Rashtriya Raksha University, Shivamogga Camopus  
Shivamogga.

## Abstract-

The idea of forensic science is not new in India, even though its application was unknown to our countrymen years ago. The usage of fingerprints, also known as "Trija" by the ignorant, was encouraged centuries ago because it was understood at the time that they were unique. Ancestors in the current scientific sense, but a thorough reference may be found in our literature from 2300 years ago, such as the Arthashastra by Kautilya.

With that said, this article discusses not only the evolution of forensic science in India but also goes into great detail regarding the developments that have occurred and are explained by case legislation.

This article's flawless equality of logic and reasoning will contribute to the notion that anyone familiar with the statutory interpretation can navigate it without fear.

**Key Words-** Development, Forensic Science, India, Legal Aspect, Prosecution.

## INTRODUCTION

The ancient world demanded standardized forensic practices, which backed culprits in escaping discipline. Felonious examinations and trials reckoned on forced admissions and substantiation evidence. still ancient sources contain several accounts of ways that herald the generalities of forensic wisdom that's developed centuries latterly, similar as the "Eureka" legend told of Archimedes( 287 – 212 BC).

In ancient India too, medical opinion was constantly applied to the conditions of the law. By law the minimal age for the marriage of girls was fixed at 12 times; the duration of gestation was honored as being between 9 and 12 lunar months with an normal of 10 months and there's substantiation that croakers had to comment on similar cases.

Sir William Herschel was one of the first to endorse the use of characteristic in the identification of felonious suspects. While working for the Indian Civil Service, he began to use thumbprints on documents as a security measure to help the also-rampant repudiation of autographs in 1858. In 1877 at Hooghly( near Calcutta) he introduced the use of fingerprints on contracts and deeds and he registered government pensioners' fingerprints to help the collection of plutocrat by cousins after a pensioner's death. Herschel also fingerprinted captures upon sentencing to help colorful frauds that were tried in order to avoid serving a captivity judgment .

In 1897 a Fingerprint Bureau was established in Calcutta( Kolkata), India, after the Council of the Governor General approved a commission report stating that fingerprints should be used for the bracket of felonious records. Working in the Calcutta Anthropometric Bureau, before it came the Fingerprint Bureau, were Azizul Haque and Hem Chandra Bose. Haque and Bose were Indian point experts who have been credited with the primary development of a point bracket system ultimately named after their administrator, Sir Edward Richard Henry. The Henry Bracket System, co- cooked by Haque and Bose, was accepted in England and Wales when the first United Kingdom Fingerprint Bureau was innovated in Scotland Yard, the Metropolitan Police headquarters, London, in 1901. Sir Edward Richard Henry latterly achieved advancements in dactyloscopy.

In 1968, the Ministry of Home Affairs, Government of India, set up a Forensic Science Laboratory for Delhi Police and the Central Bureau of Investigation under the executive control of the Central Bureau of Investigation. This laboratory now provides expert opinion on colorful aspects of Forensic Science concerning crime disquisition. piecemeal from Delhi Police and the CBI, it also provides backing to the Central Government Departments, State Forensic Science Laboratories, Defense Forces, Government Undertakings, Universities, and Banksetc. in felonious cases. The laboratory has are hunt and development set up to attack special problems. The moxie available at the CFSL is also employed in tutoring and training conditioning conducted by the CBI, Lok Nayak Jai prakash Narayan, National Institute of Criminology & Forensic lores, Police Training Institutions, Universities and Government Departments conducting Law Enforcement Coursesetc.

In the 19th century, it was discovered that nearly any contact between a cutlet and a fixed face left a idle mark that could be made visible by a variety of procedures(e.g., the use of a fine greasepaint). In 1894 in England the Troup Committee, a group established by the Home Secretary to determine the stylish means of particular identification, accepted that no two individualities had the same fingerprints — a proposition that has noway been seriously refuted. In 1900 another commission recommended the use of fingerprints for felonious identification. point substantiation was first accepted in an Argentine court in the 1890s and in an English court in 1902. numerous other countries soon espoused systems of point identification as well.

Forensic wisdom, an admixture of nearly all faculties of knowledge is an essential and effective enabler in the division of justice in felonious, civil, nonsupervisory and social surrounds. Historically our fathers in India have

rehearsed forensic operation in variety of forms. Present day Indian forensics, as told, owes its birth to several British initiated gambles similar as Chemical Examiner 's Laboratory( Madras, 1849), Anthropometric Bureau( 1892), Cutlet publish Bureau( 1897), Inspectorate of Snares( 1898), Office of Government Handwriting Expert( 1904), Serology Department( 1910), Foot publish Section( 1915), Note Forgery Section( 1917), Ballistics Laboratory( 1930) and Scientific Section( 1936). Having latterly experienced clubbing/ regrouping/ spreading, as of now, there are 28 State/ Union Territory Forensic Science Laboratories( State/ UT FSLs) along with their Regional FSLs( 32 RFSLS) and Mobile FSLs( 144 MFSLs); they're substantially with the separate Home Department either directly or through police establishment.

In present time the term crime has been given multitudinous description by numerous prominent justices like Sir William Blackstone defines crime in his \_ narrative on Law of England ' as An act committed in violation of public law proscribing or commanding it. also, Sir James Stephen defines crime as An act proscribing by the law and revolting to the moral sentiments of the society. Whereas, Kenny states that Crime are wrongs whose permission is corrective and in no way excusable by an private person, but is excusable by the Crown alone, if remissible at all.

Just like for the identification of any kind of organism it's necessary that one looks into its DNA and to identify individualities, forensic scientists overlook DNA regions, or loci, that vary from person to person and use the data to produce a DNA profile of that existent( occasionally called a DNA point). There's an extremely small chance that another person has the same DNA profile for a particular set of 13 regions.

Among the numerous new tools that wisdom has handed for the analysis of forensic substantiation is the important and controversial analysis of deoxyribonucleic acid, or DNA, the material that makes up the inheritable law of utmost organisms. DNA analysis, also called DNA typing or DNA profiling, examines DNA set up in physical substantiation similar as blood, hair, and semen, and determines whether it can be matched to DNA taken from specific individualities. DNA analysis has come a common form of substantiation in felonious trials. It's also used in civil action, particularly in cases involving the determination of Maternity of Identity.

Forensic Science in moment 's world is an advanced scientific fashion which is used in felonious and civil examinations, it's able of answering important questions and forms an intertwined part of felonious justice system. Both State and Central Government have developed Labs for the same which intern help courts, police system and private agents and individualities during disquisition or cross examination procedure.

During the disquisition forensic substantiation is collected by the expert at the scene of the crime and each substantiation is so collected is so unique in its own way that it becomes necessary to test it and to analyses it independently in order to reach to the conclusion. occasionally, complex cases involve multiple experts specializing in the same field to examine and to give the analysis with respect to the substantiation so collected.

Today more than 30 million cases are still unresolved either the courts in India and organizations like the International Forensic Sciences (IFS) and Central Forensic Science Laboratory (CBI) are used as an substitute solution.

### SUB-DIVISIONS:

**Forensic accounting** is the study and interpretation of counting substantiation- Forensic upstanding photography is the study and interpretation of upstanding photographic substantiation.

**Computational forensics** concerns the development of algorithms and software to assist forensic examination.

**Criminalistics** is the operation of colorful lores to answer questions relating to examination and comparison of natural substantiation, trace substantiation, print substantiation( similar as fingerprints, footwear prints, and tire tracks), controlled substances, ballistics, arm and tool mark examination, and other substantiation in felonious examinations. In typical circumstances substantiation is reused in a Crime lab..

**Forensic dactyloscopy is the study of fingerprints.**

**Digital forensics** is the operation of proven scientific styles and ways in order to recover data from electronic/digital media. Digital Forensic specialists work in the field as well as in the lab.

**Forensic document examination** or questioned document examination answers questions about a disputed document using a variety of scientific processes and styles. numerous examinations involve a comparison of the questioned document, or factors of the document, with a set of known norms. The most common type of examination involves handwriting, whereby the monitor tries to address enterprises about implicit authorship.

### RESEARCH QUESTION

The object of this paper is to understand the origin of Forensic Science and its introduction along with development in India.

This paper will explain how this science has become an integral part of our justice system along with the impact it has created on the perception of experts.

### ANALYSIS

Forensic Science is defined as the operation of wisdom in answering questions that are of legal interest. More specifically, forensic scientists employ ways and tools to interpret crime scene substantiation, and use that information in examinations. Forensic scientists and technicians come from a variety of academic backgrounds, although utmost have completed coursework in the life lores, chemistry and law enforcement.

The creation of National Accreditation Board For Testing and Calibration Laboratories( NABL) has been for the purpose of four objects which define the purpose and nature of the program.

- To ameliorate the quality of laboratory services handed to felonious justice system.
- To develop and maintain criteria which can be used by a laboratory to assess its position of performance and to strengthen its operations.
- To give an independent, unprejudiced and objective system by which laboratories can be served through a total functional review.
- To offer to the general public and druggies of the laboratory services a means of relating those laboratories which have demonstrated that they meet established norms.

The forensic science laboratories, or the association, like the International Forensic lores( Ifs), Indian Forensic Science Improvement Board and Central Forensic Science Laboratory( CBI)etc. are fairly identifiable. The forensic science laboratories are organized and operated in such a way that it meets the delegation conditions, while performing work in its endless, temporary or mobile installations( including field operations and indigenous laboratories). The laboratory easily defines and documents the type and extent of the forensic science services it provides. operation ensures that The laboratory doesn't engage in any conditioning that might dwindle trust in its capability, equity, judgment or functional integrity, and The laboratory labor force are free from marketable, fiscal or any other pressure that might negatively affect the quality of their work.

### Forensic Science and other Statutes:

In India, law regarding substantiation is invariant in both Civil and felonious cases, the degree of evidence

needed may be kindly different in civil and felonious cases but mode of giving substantiation is govern by same legislation. In India, we've inimical system of justice administration and naturally medical substantiation is admitted only when the expert gives an oral substantiation under pledge in the courts of law except under special circumstances like

- When substantiation has formerly been admitted in a lower court;
- Expert opinions expressed in a composition
- Substantiation given in a former judicial proceeding;
- Expert can not be called as substantiation;

In, India, Hospital records like admission/ discharge register, birth/ death instrumentsetc., it's a common perception that lot of time and trouble is needed to record substantiation and thus by enlarge members of the medical profession doesn't like to involve in medico legal cases. Some of the possible reasons put forward for this perception are:

Undue time consumption;

Repeated adjournments;

Procedure Code and Indian substantiation Act 1872 are the parent procedural laws which govern felonious trials in India, while Felonious procedure law prescribes the procedure from the point of taking cognizance of crime by applicable judicial Adjudicators till the delivery of final order of Conviction or vindication or any applicable order looking into the fact of the case. Indian substantiation Act is limited in its compass of leading attestations in civil or felonious cases moreover by the execution or defendant, aspirant or replier. Act also deals with kind of attestations and applicability of any fact which can be brought as substantiation in any case.

Sec. of the Criminal Procedure Code(Cr.P.C.) must also be amended so as to draw adverse conclusion against the indicted if he fails to answer any applicable material against him thus, making it easy for the law enforcers to use DNA tests against him.

The field reality is that while the same law of Criminal Procedure,( Indian) substantiation Act and( Indian) Penal Code apply to all the citizens of India, forensic services accorded to the different population parts by the colorful delivery units of the Union, State and UT weal governments, still, differ owing to slants of professional( training) development, procedures & processes, external exposure, outfitetc. coffers, enabling logistics and service conditions. The scene also represents sinter-regional variations with respect to the population size, and the volume and nature of crimes.

So far as felonious justice in India is concerned doctrine of onus probandi is in the field and thus — One shall be presume innocent till his crime is proved | not only proved but proved beyond reasonable mistrustfulness, this principle of Onus probendi is honored under chapter of the substantiation Act which has confined use of forensic wisdom in felonious trials in India. It's veritably delicate to say anything beyond reasonable mistrustfulness so far as ways of catching on fact with the help of forensic science is concerned. But with the passes of time ultramodern ways developed in the field of Forensic wisdom are able of catching on data kindly beyond reasonable mistrustfulness. In this background it's more applicable to conduct a study in the recent Judgments of Supreme Court of India to see the change in the approach and station of Judiciary in appreciating forensic attestations in Felonious cases.

### **Forensic Science and Criminal Prosecution Scene of Occurrence:**

A scene of circumstance can be defined as the meeting place of the persons involved in the crime. Traces are changed by the parties amongst themselves and with the scene, leaving odds and ends and mark of tools, wearing apparels, and means of transport, hands and bases. therefore, the scene of circumstance provides a wealth of information which is useful to:

Establish corpus delicti give link between the felonious, the victim and the scene of circumstance; and estimate the

pattern of events

Except in the cases of phony is less important due to limited mileage, the scene is of great significance in nearly all crimes. Planning, care and industriousness are needed in the examination of the scene. The success or failure of the disquisition in numerous cases depends entirely upon the proper running of the scene. The scene of circumstance can not be saved ever and changes fleetly.

Some of the substantiation gets lost soon after the circumstance; the other substantiation disappears, gets defiled or altered with farther passage of time. The occasion to examine the scene is available only formerly. If the same isn't completely exploited the wealth of information is lost ever.

### **In Marachalil Chandra Tukaram Talekar v. State of Gujarat.**

It was argued with great vehemence in the High Court as well as in the court of sessions that there was trial of blood from the frontal door of the house of the vakil into the corridor apartments pronounced H and H- 1 in the plan and that supported the defense proposition that the departed Kannan entered the stab injuries not in or near the house in question but nearly far down near the road station. The High Court took the view that if Kannan had entered the injuries nearly outside the house it was insolvable for him to have come into the room in view of the croaker's substantiation. It was concluded on the material placed on the record that there could be no room for mistrustfulness that Kannan entered the injuries in the room itself and not outdoors, and that he was carried out of the room while life was still moping and thus, there would be trickling of the blood from the body during the course of conveyance as the injuries were veritably serious and vital highways had been cut.

#### **Fingerprints:**

The identification of culprits through fingerprints was the first important break-through in the scientific disquisition of crime. As usual, the bar and the public took some time to believe in the mileage of fingerprints as a scientific aid.<sup>20</sup> The same is now honored throughout the world. The significance of fingerprints in felonious disquisition is immense, because they are:

#### **Unique**

Ridge pattern of each finger has individuality. The patterns vary not only from one individual to another, but they are different in the same individual on each finger. Duplication of pattern has never been observed. Nor the same is expected.

#### **Permanent**

The fingerprints of an individual do not change throughout his life. In fact, the ridges appear before birth. They start appearing during third or fourth month of pregnancy. They remain even after the death of the individual ever till the epidermal skin is destroyed by fire, putrefaction or is eaten by insects or other creatures.

In a murder case the body of the victim was partially burnt and buried. The same was discovered many days after the murder. The body was completely disfigured and could not be identified. The investigating officer got removed the remaining skin pieces from the tips of the fingers through a doctor. He sent them to fingerprint bureau along with the one authentic print of the deceased available on his will. The bureau confirmed the identity of the deceased. The digital skin pieces were recovered and sent to the finger print bureau. The fingerprints of the deceased tallied with the fingerprints of the convict, available in the records, the permanence of fingerprints permits identification of an individual even after many years, if his finger print record is available. Many criminals have been identified through this medium after years of absconding.

#### **Universal**

All individuals and hence all criminals carry this medium of identification. The finger digits and surface of the hands carry the friction ridges. The fingers have more intricate patterns. They allow easier individualization and classification.

A criminal uses his hands in the commission of crime. He leaves marks at the scene of occurrence or on the objects which come in contact in the commission of crime. There are fair chances of occurrence of finger prints,

therefore in all types of crime.

### **Inimitable**

Successful forgery of fingerprints has not been reported so far. Near perfect forgeries have been attempted. It is possible that the advancement of science may bring the forgery still closer to perfection but complete success in the enterprise is extremely difficult, if not impossible.

For all practical purposes it may be taken that it is not possible to forge a fingerprint. This is important because no person can deny his or her fingerprints. The identification through fingerprints is certain and infallible.

In *Bazari Hajam v. King Emperor*

The question arose whether it will be safe to act on the uncorroborated testimony of the fingerprints and declare the guilt of the accused.

On this point Bucknill, J., observed thus:

“I think that apart from the fact that I should be rather sorry without any corroborative circumstances to convict a person of a serious crime solely and entirely upon similarity of thumb marks or finger prints, the very fact of the taking of a thumb-impression from an accused person for the purpose of possible manufacture of the evidence by which he could be incriminated is in itself sufficient to warrant one in setting aside the conviction upon the understanding and upon the assumption that such was not really a fair trial.”

The above view was disapproved of by Schwabe, *C.J. in Public Prosecutor v. Kandasami Thevan* although the point did not directly arise in the case as there were thumb-impressions of the accused in evidence other than that taken by the judge in court for comparison with the thumb-impressions in the document alleged to have been forged.

### **Track Marks:**

The malefactor approaches, stays and also leaves the scene of circumstance. He leaves track marks on and around the place in the form of prints and prints (inclusively called — marks) of bases, shoes, tyres, hoofs and the suchlike. The substantiation frequently connects the felonious with the crime conclusively. It should, thus be duly understood, collected, estimated and presented in the courts. The track marks establish not only the presence of the malefactor at the scene of crime but also give the number of actors. The substantiation is helpful in tracking down the culprits to their houses or hide-outs, especially in India where utmost of the people live in pastoral areas. The roads in the country side aren't essence led. either, the felonious, naturally, follows untraded routes; fields, theater and sluice beds. He leaves track marks on routes used before and after the commission of the crime. The nature of the vehicle used in the commission of crime whether it's a cycle, scooter, auto, machine, truck, tractor, gharry, bullock wain or a buggy can be caught on. It's occasionally possible to identify the individual vehicle also. In some cases creatures are involved in crimes occasionally. For illustration, a steed or a camel may be used for transport; a cow, a buffalo or a bullock may be stolen or a canine or a regulated wild stylish, like a snake or a barracuda may be used to destroy or kill a mortal-being or a domestic beast. The type of the beast or the beast can be set up out from the track marks. Foot Wear marks includes the marks of shoes, sandals, chappals, socks and the suchlike. The footwear may be plant-made or hand made.

Rejecting the contention that the study of vestiges isn't a wisdom in *Din Muhammad v. Emperor*, the court of the Judicial Commissioner at Nagpur (H.J. Stanyon and H.F. Halifax, A.J. Cs) as far back as in 1914 held: The knowledge of vestiges has also been ranged and pursued by trackers, substantially uncultivated and ignorant people and all other felicitations, each over the world. The matter is thus really a wisdom and the opinion of a person especially professed in it's a applicable fact, under Sec- 45 of the substantiation Act.

### **Necessity of application of Forensic Science**

In criminal investigation, use of forensic wisdom is the need of the ultramodern times. In India, the disquisition of crime and execution of persons having committed the crime aren't over to the mark. Indeed in heinous crimes

large number of culprits couldn't be fulfilled and a many chance of trials end in vindication as a result of which number of culprits and crimes are adding day- to- day. These frequent clearings are substantially due to obsolete ways of disquisition which leave numerous loopholes. therefore, for effective disquisition scientific ways of disquisition is not necessary. The — third degree ll styles used by the probing agencies in British period aren't accepted by the new generation of Criminal probing Agencies, judges and public at large. — Third degree ll styles for making concession haven't fully dissolved but their abuse has increased and to control over this issue, the Human Rights Commissions has been established in India and each over the world. Hence, ultramodern scientific styles for disquisition of crimes and connecting the culprits with the overt acts are veritably much necessary in order to make effective the Criminal Justice System.

### Cases Solved using Forensic Science

#### **Vasu v. Santha 1975 (Kerala)**

In the above cases the court has laid down certain guidelines regarding DNA tests and their admissibility to prove parentage. That courts in India cannot order blood test as amatter of course;

Wherever applications are made for such prayers in order to have roving inquiry, the Forensic evidences in Criminal Trial: Need of the Hour prayer for blood test cannot be entertained

There must be a strong prima facie case in that the husband must establish non-access in order to dispel the presumption arising under Section 112 of the Evidence Act.

The court must carefully examine as to what would be the consequence of ordering the blood test; whether it will have the effect of branding a child as a bastard and the mother as an unchaste woman.

No one can be compelled to give sample of blood for analysis. Further the court said Blood-grouping test is a useful test to determine the question of disputed paternity. It can be relied upon by courts as a circumstantial evidence, which ultimately excludes a certain individual as a father of the child. However, it requires to be carefully noted no person can be compelled to give sample of blood for analysis against his/her will and no adverse inference can be drawn against him/her for this refusal.

#### **Tandoor Murder Case (1995) Delhi**

This was the first criminal case in India solved by the help of forensics. In this case Shusil Sharma murdered his wife at home by firing three bullets in to his wife Naina Sahni's body. He killed his wife believing that she had her love affair with her classmate and fellow congress worker Matloob Karim. After murdering his wife Sharma took her body in his car to the Bagiya restaurant, where he and restaurant manager Keshav Kumar attempted to burn her in a *tandoor* there. Police recovered Sharma's revolver and blood-stained clothes and sent them to Lodhi Road forensic laboratory. They also took blood sample of Sahni's parents, Harbhajan Singh and Jaswant Kaur and sent them to Hyderabad for a DNA test. According to the lab report, "Blood sample preserved by the doctor while conducting the postmortem and the blood stains on two leads recovered from the skull and the neck of the body of deceased Naina are of 'B' blood group." Confirming that the body was that of Sahni, the DNA report said, "The tests prove beyond any reasonable doubt that the charred body is that of Naina Sahni who is the biological offspring of Mr. Harbhajan Singh and Jaswant Kaur." And finally Mr. Shusil Sharma was found guilty with the help of forensic evidences.

### CHANGES REQUIRED

Lack of work culture in the courts Hardly, any scientific data is available to support or refute this perception in relation to medical substantiation. thus, it was planned to take over a airman study to dissect the amount of time and trouble put in by medical experts to get the substantiation recorded in felonious courts and other issues related to it.

The influence of forensic wisdom in India has been to such an extent that the Malimath Committee in its report asked a many section of the Criminal Procedure Code to be amended in order to accommodate the principles of

Forensic Science like:

A specific law should be legislated giving guidelines to the police setting invariant norms for carrying inheritable information and creating acceptable safeguards to help abuse of the same.

A national DNA database should be created which will be immensely helpful in the fight against terrorism. More well- equipped laboratories should be established to handle DNA samples and substantiation. Sweats should be taken to produce further mindfulness among general public, Prosecutors, judges and police ministry.

The work in Forensic Science Laboratories being interdisciplinary in nature, there's a need to develop and condense the — General Criteria for Laboratory Accreditation I for the purpose of accrediting Forensic Science Laboratories. The document — Specific Criteria for Accreditation of Forensic Science Laboratories II has been evolved by a Technical Committee specifically constituted for the purpose. It supplements the document — General Conditions for the capability of Testing and Calibration Laboratories I and provides specific guidance on the delegation of Forensic Science Laboratories for assessors as well as the laboratories who are preparing for accreditation.

### **Suggestions by Malimath Committee:**

More well- equipped laboratories should be established to handle DNA samples and substantiation. A specific law should be legislated giving guidelines to the police setting invariant norms for carrying inheritable information and creating acceptable safeguards to help abuse of the same. A public DNA database should be created which will be immensely helpful in the fight against terrorism. Sec 313 of the CR.P.C must also be amended so as to draw adverse conclusion against the indicted if he fails to answer any applicable material against him thus, making it easy for the law enforcers to use DNA tests against him.

### **CONCLUSION**

There's an agreement that medical and forensic substantiation plays a pivotal part in helping the courts of law to arrive at logical conclusions. Thus, the expert medical professionals should be encouraged to take over medico legal work and contemporaneously the atmosphere in courts should be unanimous to the medical substantiation. This attains utmost significance looking at the outgrowth of the case, since if good experts avoid court attendance, less objective professional will fill the gap, eventually affecting the justice. The need to involve further and further professionals in expert evidence has been felt by different associations. Though numerous plans have been brought before the ministry of Home Affairs which includes conformation of Forensic Council where not only the substantiation Act but the Information Technology Act and The Code of Criminal Procedure will come reciprocal to the Science.

### **REFERENCES**

#### **Cases:**

Sushil Sharma v. The State (Delhi Administration) 1996 CriLJ 3944

Vasu v. Santha AIR [1986] M.P. 57,

*Marachalil Chandra Tukaram Talekar v. State of Gujarat*, 1980 Cri. L.J.5 (Guj.)

*Bazari Hajam v. King Emperor*, AIR 1922 Pat.73:23 Cr. L.J 638

*C.J. in Public Prosecutor v. Kandasami Thevan*, AIR 1927 Mad. 696:27 Cr. L. J 1251

*Din Muhammad v. Emperor*, Central Provinces Police Gazette dated 27th May, 1914 pp. 125-130

#### **Books:**

Crime Scene and Evidence Collection Handbook. Washington, D.C.:

Bureau of Alcohol, Tobacco and Firearms, 1999

Forensic Science in Criminal Investigation & Trials, B. R. Sharma, Fourth Edition, Universal Law Publications.

NIJ. Electronic Crime Scene Investigation: A Guide for First Responders (2001)

Saferstein, R. Forensic Science Handbook, Volumes I, II, III. Englewood Cliffs, N.J.: Prentice-Hall, 1982/1988/1993.

### Websites

[http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Forensic\\_science.html](http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Forensic_science.html)

[www.ifs.edu.in/IFS.EDU.BROCHURE.pdf](http://www.ifs.edu.in/IFS.EDU.BROCHURE.pdf)

<http://www.britannica.com/>

### Research Papers:

-Forensic Science in Criminal Investigation, Dr. Jai Shanker Singh, Unique Law Publications.

-Forensic Sciences and Criminology by Wafi Aziz Safwi. Available at [www.legalservicesindia.com](http://www.legalservicesindia.com).

-History and development of forensic science in India by RK Tewari, KV Ravikumar Bureau of Police Research & Development, Ministry of Home Affairs Government of India, New Delhi, India.

-Victims and Criminal Justice System in India: Need for a Paradigm Shift in the Justice System Available at [www.doiserbia.nb.rs](http://www.doiserbia.nb.rs)

Adarsh M. Dhabarde, Forensic Evidences in Criminal Trial: Need of the Hour, [www.ssrn.com](http://www.ssrn.com).

Arindam Datta, -Forensic Evidence: The Legal Scenario, Dept. of Law, University of Calcutta, <http://www.legalserviceindia.com/article/1153-Forensic-Evidence.html>

Forensic-Evidence.html

Dr. Gopal Ji. Misra & Dr. C. Damodaran, -**Perspective Plan For Indian Forensics**, Final Report presented to the Ministry of Home Affairs Government of India, New Delhi.

Dr. Nirpat Patel The Role in Criminal investigation- Admissibility in Indian Legal System and future perspective, International Journal of Humanities and Social Sciences, [www.ijhssi.org](http://www.ijhssi.org).

Herschel, William James (November 25, 1880). Skin Furrows of the hand.

Nature 23(578):76

[www.mass.gov/eea/docs/dfg/nhesp/vernal/ma-aerial-survey-pvp.pdf](http://www.mass.gov/eea/docs/dfg/nhesp/vernal/ma-aerial-survey-pvp.pdf)

specific guidelines for accreditation of forensic science laboratories and checklist for assessors.

Schafer, Elizabeth D. (2008). -Ancient science and Forensics. In Ayn Embar-seddon, Allan D. Pass (eds.) Forensic Science. Salem Press p.40.

ISBN 978-1-58765-423-7

Sir Krishna, Forensic Science, Symbiosis Law School, Pune, India, <http://www.legalservicesindia.com/article/article/forensic-science-601-1>.

Sodhi J.S.; Kaur, asjeed (2005). -The Forgotten Indian Pioneers Of Fingerprint Science. Current Science 88 (1): 185-191.