

AN ANALYTICAL STUDY ON IDENTITY OF FINGER PRINT WITH EXPERT OPINION

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ABSTRACT:-

Fingerprints are used the gold standard for personal identification for the forensic group of people for more than one hundred years. Fingerprints and finger marks join to give the most dominant income of personal classification accessible to police and courts. The necessary patterns of fingerprints are loops, whorls and arches that can be create in fingerprints. The standard methodology used by fingerprint experts to conduct friction ridge examinations is called ACE-V, for analysis, comparison, evaluation, and verification, which are the four fundamental phases utilized in this process. We can therefore say that in investigating crimes, we are using traditional analytical approaches with contemporary methods and “state of the art” tools. Physical evidence has the possible to play a critical role in the overall investigation and resolution of a alleged criminal act. Once a print has been revealed, it is typically study or “lifted” and transferred to a laboratory. Then the fingerprint was defined and the process was done by the expert to identify the accused. Finger printed evidence is helpful to find out the accused person and it not play a role to find out the raped accused person.

Keywords:- Fingerprint, laboratory, analysis, accused person, identity, prints.

INTRODUCTION

Crime scene study is a process that aims at footage the scene as it is first encountered, and recognize and collecting all mental evidence potentially relevant to the solution of the case. Crime scene investigators who have received wide-ranging forensic training usually

quickly take over the work at the scene and execute ideas from research institutes in practice. The personnel giving out crime scenes should be aware of tools necessary to process a crime scene and a mechanism to secure and carry the evidence to the laboratory. Physical evidence has the possible to play a critical role in the overall investigation and resolution of a alleged criminal act. We can therefore say that in investigating crimes, we are using traditional analytical approaches with contemporary methods and “state of the art” tools. The assessment of dormant fingerprints involves some steps, progressing from straightforward to increasingly sophisticated. mainly fingerprints are hidden until given away by chemicals powder, liquids or gases etc. Once a print has been revealed, it is typically study or “lifted” and transferred to a laboratory. Scientists have urbanized more than 40 methods of retrieving fingerprints from crime scenes. In our commentary we will focus on a method of fingerprint recovery from human skin by finger concentrate.

At the offence scene the handle marks may be found on many surfaces, as well as glasses, woods, papers, metals, fruits, vegetables and human skin. According to forensic literature human skin is one of the smallest amount convenient surfaces for recovering ridge skin imitation. Hebrard and Donche achieved positive results of finger mark recuperation from human skin.

Swedish Black powder (100/250 ml) was used for recognition as a mental method. The powder was applied to the examined area with a round fingerprint clash with squirrel hair.

Finger marks healthier within one hour by means of Swedish Black 6 samples of fiddle with marks were in working condition for further examination.

Finger results were recovered on the chest, ulna, femur, shin (2 marks) and area of ankle. Finger grades improved between one and two hours two samples of finger marks were usable for extra question paper. Finger marks were in good health on the chest and ulna. Finger results worse amid two and three hours Four samples of finger results were usable for further review. Finger marks were recovered on the ankle. Connecting three and five hours no finger marks were well again.

HYPOTHESIS

Fingerprint evidence is helpful to find out the accused person except the raped accused.

AIM OF THE STUDY

- To trace the process for finding the evidence
- To analyse the essentiality of the fingerprint evidence.

LIMITATIONS

- The researcher is not able to do field study due to lack of time
- The researcher is not able to access the archives.

RESEARCH QUESTION

- whether the forensic science plays an integral role in proving injustice.

REVIEW OF LITERATURE

1. <http://www.mondaq.com/india/x/247286/Civil+Law/Relevancy+Of+Expert+Opinion+Before+Court>

Earlier, the Courts required expert evidence to some limited field i.e. medical doctors, engineers, architects, stockbrokers etc. With the vast development in science and technology, the need of expert opinion/evidence has now become very common as well as helpful to the Courts to reach upon a fair conclusion regarding commission of an offence. Today the role of experts has been widened and the Courts take their assistance in various aspects viz. ballistic experts, forensic experts, scientists who decide the legitimacy by DNA tests, chemical examiners, psychiatrists, radiologists and even track-dogs are playing a vital role in investigation of crimes and their evidence is admissible in the court of law.

When there is some technical issue or such issue which relates to foreign law or of science or art, or as to identity of handwriting or finger impressions and the Court has to form an opinion upon that point, then the opinion of skilled/experienced persons in their respective areas may be taken into consideration.

2. <https://indiankanoon.org/doc/7541953/>

Chamkaur Singh vs Mithu Singh

Shorn of unnecessary details, the facts relevant for disposal of the present petition are to the effect that respondent-plaintiff filed suit for recovery of ` 4,03,200/- on the basis of questioned documents. Upon notice, the petitioner-defendant put in appearance through counsel and filed his written statement. Various objections were taken. One of the objections was that questioned documents were forged and fabricated and material alterations and

additions had been made therein. On pleadings of parties, issues were framed and parties led their respective evidence. The petitioner-defendant examined V.B.Bhatnagar, handwriting and fingerprint expert in his evidence and the respondent- plaintiff examined Anil Gupta, handwriting and fingerprint expert in rebuttal evidence. Since the reports of both these experts were contradictory, the petitioner-defendant moved application for sending the questioned documents to the SFSL for comparison of alleged signatures of the petitioner-defendant and also alleged alteration and addition in the questioned documents, which has been dismissed

3. <https://indiankanoon.org/doc/1025384/>

Kishan Chand v. Sita Ram, AIR 2005 P&H 156. Expert opinion admissibility Requirement of expert evidence about test firing to find out whether double barrel gun is in working condition or not, not necessary; Jarnail Singh v. State of Punjab, AIR 1999 SC 321. The evidence of a doctor conducting post mortem without producing any authority in support of his opinion is insufficient to grant conviction to an accused; Mohd Zahid v. State of Tamil Nadu, 1999 Cr LJ 3699 (SC). Opinion to be received with great caution The opinion of a handwriting expert given in evidence is no less fallible than any other expert opinion adduced in evidence with the result that such evidence has to be received with great caution; Ram Narain v. State of Uttar Pradesh, AIR 1973 SC 2200.

4. <http://ijtr.nic.in/articles/art18.pdf>

The science of FingerPrint identification -has reached a stage of perfection and thus assumes a significant role in the day to day Administration of JUSTICE. Rai Bahadur Shri H.C.Bose of Calcutta has mentioned in his book: FingerPrint Companion that:- "FingerPrints are SELF-SIGNATURES subject to no fault of observation or clerical error and persistent throughout Life" FingerPrints serve to reveal an individuals True-Identity despite personal denial, assumed names, changes in personal appearance resulting from age, disease or accidents. Thus the question of Identification figures a good deal in both Criminal and Civil cases. Identity of persons, living or dead, Known or Unknown, of things, or handwriting or fingerPrints or FootPrints play part in establishing the Guilt or Innocence of the accused or In proof or dis-proof of the case of the parties in civil matters. Because of its simplicity and economy the practice of utilizing Finger Prints as means of identification referred to as DACTYLOSCOPY - has become established and indispensable to the Modern Law Enforcement.

5.<http://www.rsisinternational.org/journals/ijrias/DigitalLibrary/Vol.2&Issue6/01-09.pdf>

A forensic purposes and new techniques and methods are constantly being added. Forensic science includes such diverse fields as forensic medicine, toxicology, psychology, and anthropology as well as the work of specialized examiners of fingerprints, firearms, tool marks, and disputed documents. We touch things every day: a coffee cup, a car door, a computer keyboard. Fingerprints can be found on practically any solid surface, including the human body. Each time we do, it is likely that we leave behind our unique signature in our fingerprints. No two people have exactly the same fingerprints. Even identical twins, with identical DNA, have different fingerprints. This uniqueness allows fingerprints to be used in all sorts of ways, including for background checks, biometric security, mass disaster identification, and of course, in criminal situations. Fingerprint analysis has been used to identify suspects and solve crimes for more than 100 years, and it remains an extremely valuable tool for law enforcement. One of the most important uses for fingerprints is to help investigators link one crime scene to another involving the same person. Fingerprint identification also helps investigators to track a criminal's record, their previous arrests and convictions, to aid in sentencing, probation, parole and pardoning decisions

6.<https://scholarship.kentlaw.iit.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1958&context=cklawreview>.

Fingerprints are unique, and can be used to identify an individual without fear of erroneous identification. This point is uncontradicted. Such identification by fingerprints may be explained by duly qualified fingerprint experts at the trial. In the majority of jurisdictions, an expert witness will be allowed to testify as to the ultimate fact that two fingerprints are identical, rather than proffer an opinion as to their identity or non-identity. Fingerprints found on a crime scene, developed, and compared with those of a defendant, are not admissible in evidence if the crime scene prints could have been deposited there when the accused was lawfully at that place. The prosecution, therefore, must prove that the crime scene prints he offers in evidence are inconsistent with the defendant's alleged absence from the scene at the time the crime was committed.

7.http://shodhganga.inflibnet.ac.in/bitstream/10603/6648/9/09_chapter%201.pdf.

History of Expert Evidence It was a very old concept that an offence could be proved through scientific evidence Heropelus and Eracis were the two physictans who conducted a

postmortem in 300 BC In Alexandria A European collector W~lliam Hershhal discovered the factum that persons could be distinctly identified with the help of fingerprints. The courts have been usual to act on the opinion of experts from very early times. But the procedule used for trial was different. Before the 16lh Century, the trial was merely a submission to a mechanical process of proof. At that time there was no person nan~ed as an expert. Cases were tried by a group of rational men using reasoning process upon the information before them. Jury system was there and witnesses who were acquainted with the facts of the case were included in the jury panel. The first time, it was in 1562, that a process was issued to compel witnesses to attend and testify in the Common law courts.⁵⁴ At that time courts used two types of methods for obtaining the specialised knowledge. One was to empanel a jury of persons specially qualified to pass judgements in a particular case The second was for the court to summon skilled persons to inform it about matters beyond its knowledge. By the middle of the 17th century, the office of jury had become clearly distinct from that of a witness. The party system of experts had started by the middle of 18th century.

8.https://www.researchgate.net/publication/228226213_Evidentiary_Value_of_Expert_Opinion_Under_Indian_Evidence_Act

Law of evidence allows a person - who is a witness to state the facts related to either to a fact in issue or to relevant fact, but not his inference. It applies to both criminal law and civil law. The opinion of any person other than the judge by whom the fact has to be decided as to the existence of the facts in issue or relevant facts are as a rule, irrelevant to the decision of the cases to which they relate for the most obvious reasons - for this would invest the person whose opinion was proved with the character of a judge. The rule however, is not without its exceptions. "If matters arise in our law which concern other sciences or faculties, we commonly apply for the aid of that science or faculty which it concerns." The expert witness is, thus, an exception to the exclusionary rule and is permitted to give opinion evidence. The Judge is not expected to be an expert in all the fields - especially where the subject matters involves technical knowledge. He is not capable of drawing inference from the facts which are highly technical. In these circumstances he needs the help of an expert - who is supposed to have superior knowledge or experience in relation to the subject matter. This qualification makes the latter's evidence admissible in that particular case though he is no way related to the case. Because an expert has an advantage of a particular knowledge vis-à-vis a judge who is not equipped with the technical knowledge and hence not capable of drawing an inference from the facts presented before him.

9.http://www.isca.in/FORENSIC_SCI/Archive/v4/i6/1.ISCA-RJFS-2016-006.pdf

Deoxyribonucleic Analysis (DNA): Each person's genetic makeup contains DNA. This differs from individual to individual. DNA can be obtained through blood, saliva, semen, or hair. This helps in identifying a person. If a drop of blood or a strand of hair is found at a crime scene, it can be compared to a person's known DNA to see if there is a match, thereby linking the person to the crime. An expert witness can give an opinion about the likelihood that the blood that was found at the crime scene came from the individual whose sample was compared. DNA analysis is also used to establish paternity. Experts believe that the ability to link the culprit to the crime scene through his DNA prints is unquestionable as unlike conventional fingerprints that can be surgically altered, DNA is found in every tissue and no known chemical intervention can change it. As far as paternity is concerned, now it has become very usual to direct the use of blood tests. Blood groups according to the scientists have a causative relation between the trait of the progenitor and that of the progeny. In other words the blood compositor of child may be of some evidence as to the child's paternity. The blood group tests are useful only to exclude the possibility that a man is the father. Sophisticated blood tests are now being adopted which are so advanced as capable of providing a very high or low probability of paternity. Tests made of the DNA can provide what can practically be regarded as certainty in paternity cases.

10.<http://www.mondaq.com/india/x/247286/Civil+Law/Relevancy+Of+Expert+Opinion+Before+Court>

Expert Evidence in Indian Evidence Act: Expert evidence is covered under Ss.45-51 of Indian Evidence Act. S.45 of the Act allows that when the subject matter of enquiry partakes of science or art as to require the course of previous habit or study and in regard to which inexperienced persons are unlikely to form correct judgment. Therefore the opinion of persons having special knowledge of the subject – matter of the enquiry and described as experts is made relevant. However, whether a particular person is a competent witness or not is to be proved in the Court of Law before his testimony is admitted. The competency of an expert is a preliminary question before the Judge. An expert need not be a paid professional expert who makes living by giving such evidence, but he must have devoted sufficient time and study to the subject so that he can make his evidence trustworthy.

MATERIALS AND METHODS:

The researcher has undergone doctrinal research methodology.

Secondary Sources:

Books, Internet Published Article and Journals.

The methodology used in this study is doctrinal. It is based on the information and the analytical study from secondary sources. They include publication research, journals, historical information. When a research is concerned with legal problems, issue or question, it is referred to as doctrinal theoretical or pure legal research. Doctrinal research is a theoretical study where mostly secondary sources of data are used to seek to answer one or two legal proposition or questions or doctrines. Its scope is very narrow and there is no such need of field work.

TYPES OF EVIDENCE:

- a. Direct evidence: it establish the fact devoid of needing further investigations. The most significant one is the eyewitness or victim declaration; however, their announcement can be prone to many inaccuracy and may be contradicted or supported by previous types of evidence (e.g., biological evidence for DNA testing).
 - b. Circumstantial evidence: it requirements to be branded and coordinated with a control or mention sample unruffled from the victim, guess, and/or the crime scene or database. Although it is more purpose than direct evidence, it must be handled carefully aim to avoid risk of destruction, blemish, or loss. It is the mainstream of the evidence analyzed in the forensic laboratories and can be alienated into two basic lessons. ([Lupariello et al. 2018](#))
- Physical evidence:

it includes items of no organic origin, such as finger and footprints, shoe/tire imitation, fibers, paint, soil, dirt, glass, headlamps or arson debris, explosives and gunshot residue, and figured injuries (e.g., bite marks, scratches). They are very of use to spot the crime scene in addition to should be calm when available.
 - Biological evidence:

it includes items from a birth origin, usually from the sufferer or the executor (e.g., semen, vaginal fluid, oral fluid, sweat, blood, and other body fluids, hair, cell of the hypothetical perpetrator under a victim's finger nail, or epithelial cells of the supposed victim present on the penis of the doer) and botanical basics (e.g.,

pollen, plants, and wood). It is measured the most imperative type of evidence since it is very helpful to prove that bodily/sexual contact occurred and to identify a doer through DNA study.[\(Horswell 2016\)](#)

EVIDENCE PRESERVATION

The expert to whom the container was reported should tell the victim or any human being, who reported the occurrence/offence concerning practice that the victims have to refrain from until FME can be ended

- a. sprinkling or wash any part of the cadaver, including mouth, hands, and head hair;
- b. brush teeth;
- c. clean or hack fingernails;
- d. comb or cut dye hair;
- e. carry out vaginal irrigation;
- f. urinate, defecate, or vomit (and if this is essential, do it in a clean container with a lid);
- g. eat, drink, chew, or smoke;
- h. run or perform any kind of sport activities or the same;
- i. change, wash, or destroy wear worn during the event;
- j. change or destroy clean pads worn out during the event;
- k. touch the wrong scene (including emptying nonsense can or flushing the toilet).

Moreover in order to stop DNA filth, the forensic examiner must accurately select the type of fabric used for compilation and storage space (e.g., paper versus plastic containers—please and ensure whole drying of the sample previous to packaging.

REASON FOR RAPED ACCUSED CANNOT BE IDENTIFIED THROUGH FINGERPRINT.

BIOLOGICAL EVIDENCE:

- a. Semen (spermatozoa postponement in the determining fluid): it is rarely present in spoken, anorectic, and vaginal cavities 6, 24, and 72 hours after sexual contact,

respectively .In vaginal cavity the half-life moment depends on the epoch of the wounded (pre- or postpubertal) and if the semen is local in the cervix, the half-life may be much higher than 72 hours .In postpubertal girls spermatozoa may remain motile in the vaginal secretions for 6 to 12 hours and in the cervix for as long as 5 days no motile spermatozoa may be set up in stains of vaginal secretion from 12 to 48 hours after ejaculation. The half-life of semen in the prepubertal girls is relatively shorter payable to the nonexistence of cervical mucus .Dried secretions on clothing remain quite stable, so that semen may be detected for longer than 1 year .These half-lives characterize mere estimations, since numerous variables (that must be described in the forensic medical account) must be careful when documenting the attendance or not of semen in sexual assault suitcases

- (1) the type of training and conditions (e.g., where data is deposited; ejaculation occur in the skin, oral, anal, or vaginal mucosa or in the cervix; condom use; the executor is azoospermic or vasectomised);
 - (2) the time between sexual get in touch with and evidence collection;
 - (3) victim's gender, age, and performance (e.g., urinating, defecating, vomiting, brushing teeth, bathing, consumption, drinking, smoking, spitting, organization, and on foot) after sexual contact.
- b. Observation of spermatozoa under an visual microscope or by segment contrast microscopy (no stains): these are well thought-out for conclusion of sexual contact and the simultaneous observation of motile spermatozoa allows estimating the time of the assault. However, since these techniques do not guide to the identification of the perpetrator and biological cloth is lost to do smears, some authors do not recommend this procedure. The nonattendance of spermatozoa may occur if the suspects are azoospermic or vasectomized or if semen stains are dry. beneath an optical microscope, the Florence Iodine (FI) examination is old for seminal fluid identification by detect the attendance of choline from side to side the adding up of an iodine based reagent, which produces trait brown choline periodide crystals. In a recent study, Hardinge and age bracket observed that prostate-specific antigen (PSA) is much more liable but less detailed than the FI test to substantiate the occurrence of determining fluid.

- c. Seminal acid phosphatase (AP): this enzyme is at this time in semen and for positivity, the attendance of spermatozoa is not needed since it is a prostatic enzyme. In postpubertal girls' vagina or cervix, the opening to inventory grand AP levels ranges from 24 hours to 72 hours later than ejaculation. AP levels are grand for a much shorter time in oral cavity (perhaps only 6 hours) additionally in the rectum (less than 24 hours), but only estimate are offered. On the other hand, in spite of an superior level of AP being a specific display of recent sexual intercourse and ejaculation, its use as verification is somewhat narrow due to the existence of an isoenzyme in low levels in postpubertal vaginal fluid and woman urine. The presence and deliberation of AP in prepubertal girls is mysterious. Analytical techniques to enumerate AP (e.g., Brentamine Fast Blue reaction) should be regard as direct and if result is unenthusiastic, DNA study (autosomal STRs and Y-STRs) must carry on. Indeed, the grades of the Brentamine colorimetric answer may be not easy to interpret due to the interference of fabric colors and consequently may lead to false unconstructive results.
- d. Prostate-specific antigen (PSA): it is a serine protease fashioned by prostatic epithelial cells found in loads of tissues (e.g., seminal fluid, prostatic fluid, male serum, male urine, apocrine sweat glands, and breast milk from lactating women). even though PSA is not paper handkerchief and sexual category specific, in ASA cases, the interpretation of the results have to not pose a noteworthy problem due to its low concentrations in non prostatic fluids. PSA can be set up up to 48 hours in postpubertal girls' vagina or cervix. PSA is well thought-out one of the most sensitive methods for semen detection and can be useful for azoospermic individuals. Similar to AP, PSA should be regarded as funnel and if result is negative, DNA studies (autosomal STRs and Y-STRs) necessity be perform.

CASE LAWS:

[*Raghunandan v State. Of U.P., 1974 Cri. L. J. 453 \(S.C\)*](#)

In the above container both the trial courtyard as well as the High Court had brushed aside the objection that the blood improved from the rest of happening was not sent for element assessment. The failure of the law enforcement to send the blood for substance examination is a grim case of murder, such as the single before us., is to be depreciate . In such a case the place of incidence is often doubtful.

The enquiry was raised before the session Judge as to whether a certainty can be based upon the unproven testimony of a fingerprint expert. There is no decree of law on the indicate; it is merely a matter of vigilance whether a court will act on such unsupported confirmation or not. The correct opinion was definite by S.K. [*Ghose, J. in Hatendra Nath Sen v Emperor.*](#)

[*Shruti Bhagwat murder case*](#)

The police have decided to go for a DNA fingerprinting examination in the Shruti Bhagwat murder container. The 47-year-old housewife was found cruelly murdered at her Ulkanagri residence in April 2012. The police have been aggressive to solve the case. They had questioned more than 2000 persons in the days subsequent the murder, but to no benefit. In March this year, police official Sanjay Kumar had bring in a team of experts on or after Delhi to help in solving the case. A players comprising three professor from the All India Institute of Medical Sciences (AIIMS), T D Dogra, Anupama Raina and Sanjeev Lalwani, be assisted by experts from the city's management forensic lab in analytical the crime scene. It was ultimately decisive that the police would go for the DNA fingerprinting of all the article cool from the fatalities dwelling. official of police Sanjay Kumar told TOI, "We sent the fabric from the scene of the crime to the AIIMS but recently inward bound a reply from them saying the DNA fingerprinting machine is invalid. We have now decided to send the cloth to the Centre for DNA Fingerprinting and Diagnostics (CDFD) inside Hyderabad."

[*Santosh Kumar Singh vs. State through CBI- \(2010\)9SCC747*](#)

“Though I know he is the man who dyed-in-the-wool the crime, I acquit him, giving him the benefit of doubt”.

The cruel manner of butchery Priyadarshini justifies the award of demise sentence to Santosh Kumar Singh. In Nirmal Singh (State of Haryana Vs. Nirmal Singh 1998) , it be believed that the case fell surrounded by the rarest grouping and, therefore decess decree was proper. The injuries showed that they must have be men of high immorality and brutality denuded of all human opinion.

In the container of Lalrinawas ([*State of Mizoram Vs. Lalrinawms 2000*](#)) , the accused confessed his wrongdoing and remained firm on his acknowledgment right through; therefore the death price was commute to decree of life incarceration. In the on the spot case, there is no such act on the building block of Santosh Kumar Singh which is symptomatic of any repentance. On the differing, he again and again gave false pleas and faked innocence which only adds to the aggravation side of the stability sheet.

CONCLUSION:

Forensic science plays an integral role in the wrong justice system. Well-trained forensic scientists and health check examiners can be the determining factor in the ability of evidence to sufficiently signify the facts of a case. Forensic science can be indirectly in almost any criminal case; nevertheless, investigations of butcher, rape, and arson are persons that benefit the most from forensic science.

Powder dusting is the basic and least complicated method for the recovery of fingerprints from many surfaces, from human skin as well. In this study Swedish Black powder was old for the mending of finger results and White Fingerprint Gelatine is old for copying. This study has shown that the best grades were achieved for finger marks healthier within one and three hours behind fingerprints were deposited onto human skin surfaces. Constructive finger marks be improved from chest, ulna, femur, shin and area of ankle. From the above completed research with types of evidence, preservation, biological evidence and few case laws I came to a conclusion that Fingerprint evidence is helpful to find out the accused person except the raped accused. Hence hypothesis of this study is proved.

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