CHAPTER-V

CONCLUSIONS AND SUGGESTIONS

THE MAIN OBJECTIVE of judicial system is to provide absolute justice to the aggrieved person. For this there is a proper judicial process, which has to be followed. In the process of justice multitude of issues are faced by Judges. Judges gave the justice on the basis of the witnesses and evidences produced before the court. Judges can't input their own views in it. They have to base their decision on the evidences and facts proved in the court and these are only through the proper procedure which is to be followed by the court in the judicial system.

Traditionally, only those witnesses are examined by the court and have a relevancy and admissibility, which confine or testify that they have a direct knowledge of facts relating to the case in hand. But sometimes such a situation arises before the court on which court itself cannot make any decision, that means question which belongs to other discipline than law, then court needs the advice of such a person who is an expert and has a complete knowledge on the point on which his/her advice is needed, the one who is specialized and skilled in the relevant field either through study or experience. Judges can't be all rounder; they can be experts in their field of law but not in other disciplines. They can have a sketchy knowledge of the other discipline but can't expert in that field, the judiciary main aim is to decide the issue arises before it, and is not possible to get this aim on the basis of judge’s personal knowledge and commonsense but needs experts.

As discussed in chapter - I, Justice Malimath, the Chairman of Committee on Criminal Justice System, Government of India, said that with the changing in the society its values and norms also changed, with it crime, criminals and their style of committing crime also change, so the criminal justice system of the society has to be changed it cannot be static. It is necessary that there should be some changes in the justice delivery system, there should be changes in the role and responsibility of the prosecutor and defence lawyers. Justice Malimath further said that today every profession is seeking to specialize and acquire new skills and expertise to be able to do this job efficiently. The Bar has to realise the importance of specialization and learn for example the nature and scope
Lawyers and judges should be receptive to change on the benefits of technology should be fully utilized. And the committee made the recommendation of the use of forensic science and modern technology in the investigation process from the very beginning.

Today is the era of knowledge revolution, scientific and technological advancement made a revolutionary change in the man's life. Science is the system of acquiring the knowledge through observation and experimentation; technology is the use of scientific application and knowledge into a practical to solve the problems. Where there is a systematic treatment of an art, form or skill and the manner in which task is accomplished by the using the technical process, methods or knowledge it is technology.

Technology and knowledge cannot be separable, as technology is application of science and science is the organized body of knowledge. So, technology is the use of scientific invention through the tools which are even invented by the use of science. Whenever any point of controversy arises and such a controversy has its solution in the field of science and technology, court needs the help of a person from that particular field. Science and technology joined the hand with law to solve such a problem. Science and technology had its impact on the whole of judicial system from the very beginning of investigation to the end of justice.

Tomaso Bruno & Anr v. State of U.P. the Supreme Court of India said that with the advancement of information technology, scientific temper in the individual and at the institutional level is to pervade the methods of investigation. With the increasing impact of technology in everyday life and as a result, the production of electronic evidence in cases has become relevant to establish the guilt of the accused or the liability of the defendant.

Law is the set of rules which not only stop the crimes in the society but also dictates the citizens how they should behave in the society. It is a rule of conduct which tell us as Justinian’s defines what is just and what is unjust. These days with the development of science and technology new concepts enters the field of science and technology, which can be helpful for the judicial system in performing their function. Science, law and technology should join the hands to solve the cases which is of complex

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1. Dr. Justice V. S. Malimath (Chairman), Committee on Criminal Justice System, Government of India, Ministry of Home Affairs, 21.3.
nature and can be solved easily by the help of various theories of science and technologies.

Use of science for law purpose is called forensic science. From the investigation of the case science and technology helps and commingled for justice and ensuring fair process. Forensic science provides the scientific study of investigation and technologies like MDT, RMS, LPR, GPS, CCTV helps in strengthening the crime control and ability to identify the offenders. Where the question like those related with the entomology, DNA, odontology, internet crimes arises and the investigation is done on these points court need the evidence and witnesses of the experts from the expertise field to answer them and help the court in its main task of giving justice.

Computerization and modernization of courts have its impact on court process. Application like LOBIS, COURTNIC, JUDIS, Computerised filling counters etc. had its impact on litigation and on the administration of courts. Technology of video conferencing helps the court to take a witness through it without any risk of elimination of criminals. It is useful in the solving and reducing the tension of jail personnel’s relating to security and in the case of hardened criminals.

Generally, opinion of witness is not admissible. It is the court who has to form the opinion on the facts presented before the court by the witnesses. Witnesses has only to place before the facts observed by them. In this system of justice, judges have not only to go through the facts of the case but also to ascertain the truthfulness of such assertions made by the parties and which are governed by law of evidence. Law of evidence is a procedural law, which lays down the rule and guidance for the court to be followed upon the questions of truth and also to be followed in getting the assertions and facts proved before it. And also helps in preventing the wastage of the courts valuable time upon irrelevant questions.

Fact means the existing thing. Under the Indian Evidence Act, 1872, fact means and includes anything, state of thing, or relation of things capable of being perceived by the senses and any mental condition of which any person is conscious that means and include both physical and psychological facts are those facts which are subject to perception by the five senses, have its seat in some animate and inanimate being a psychological fact is considered to have its seat in some animate being. There is the illustration attached to Sec. 3 defining facts that a man holds a certain opinion, has a
certain intention acts in good faith or fraudulently or uses a particular word in a particular sense, or is or was at a specified time conscious of particular sensation is a fact. Upon the existence and non-existence of a fact whatever a person thinks is an opinion but of which a person receives a direct knowledge without any process of thinking and reasoning and whatever is presented to his sense is not an opinion.

Courts generally relies on the direct and circumstantial evidence and weighs more the evidences which always come through direct evidence and where witnesses confine themselves to facts only rather than his or her opinion or belief. Witnesses are allowed only to provide relevant and factual evidences in court. As the Supreme Court of India in Mubarak Ali Ahmed v. State of Bombay⁴ observed that it is an ancient theory of law, which still prevails, that inferences are for the jury and that witnesses must confine themselves to facts. As a general rule a witness must only state facts and his personal opinion or belief is irrelevant. A witness has to state the facts which he has seen, heard or perceived and not the conclusion which he has formed on observing or perceiving them. The function of drawing inferences is a judicial function and must be performed by the court. If a witness is permitted to state the opinion, it would amount to delegation.

Opinion presented before the court may of Lay opinion of witness and opinion of expert. Lay opinion witness as already defined under chapter II, is a opinion of a person who is not expert and base their opinion on whatever they personally observed. In India there is not special Sec., which talks about the lay opinion witness as in Australian the Australian evidence act, Sec. 75 defines the lay opinion as opinion which is expressed by a person based on what a person saw, heard or otherwise perceived about a matter or event. In England, Sec. 3(2) of the Civil Evidence Act⁵ comments that a person not qualified to give as expert but convey the relevant facts which is personally perceived by him is admissible as an evidence of what he perceived and United States Rule 701⁶ which deals with opinion testimony by lay witness defines lay opinion witness as one who is not testify as an expert and whose opinion is based rationally on his/her perception and is not based on scientific, technical or other specialized knowledge.

⁵. 1972.
In India, while reading the Sec. 47 - 50 of Indian evidence Act, 1872 concept regarding admissibility of lay opinion testimony comes before us, as these sections deals with lay opinion testimony regarding handwriting, existence of right or custom, usages, tenets and relationships. As Sec. 47 read as: *When the court has to form an opinion as to the person by whom any document was written or signed the opinion of any person acquainted with the handwriting of the person by whom it is supposed to be written or signed that it was or was not written as signed by that person, is a relevant fact.*

The word “the opinion of any person” in this Sec. 47, means it does not talk about any expert and his opinion but talk about any person who is acquainted with the handwriting of the person whose handwriting is in question. And such a person may give testimony regarding the handwriting or signature of the person concerned.7

So, it can said that the lay opinion witness can gave a witness on only of those facts which he or she perceived by his senses and is not based on any scientific, technical or specialized knowledge. It is the judge who is to form his own conclusion or opinion on the facts stated. As earlier stated the opinion of third person as a general rule is irrelevant and therefore not admissible. But many a times there are a situation arises before the court like in a case where the death of a person is in question. The question before the court is now, how the death is caused? What is the reason of his death? Who is responsible for his death and what is the time of death? Only when the answer to these questions is given, court can come to any conclusion and the answer to these can be given only by expert like the time of death, whether death is caused by poison or not, if the reason of his death is poison then which poison is given to the deceased.

Courts usually are unwilling to allow the expert evidence or witnesses to testify about the factor which affects the credibility of the witnesses who testify about things he or she actually perceived. With the development and modernization of society, way of committing the crime is also changed. Now a day’s criminal uses the scientific methods and technology to commit the crime. Development in science and technology make tremendous changes in both the committing and investigation of crime. Now crime does not remain confine to the local or national limits but had cross the line of nation and become international. Sometimes before the investigating and court there are cases related to internet crime, question of identification where body is decomposed arises and many more situations where the answer is beyond the common knowledge.

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and experience and which needs the special study and experience for forming an opinion on such a matter, an expert, who has a special study, training and experience regarding the matter in issue can help. Like in the example given above expert can help the investigating team and court by giving the answer to the reason of death can tell whether it natural or murder, if it is murder of the way in which death is committed, time of death, and on that can reach a particular conclusion by the help of pathologist, entomologist, odontologist, DNA or fingerprint or handwriting expert.

An expert is a person who gives the opinion about the fact from the domain of his or her expertise. He is the person who has acquired the specialization in a particular subject either through study, training or experience. His extensive knowledge or ability is based on the research, experience or study in particular area. Hon’ble Supreme Court in the case titled as *Ramesh Chandra Agarwal v. Regency Hospital Ltd. & Ors* held that an expert is a person who devotes his time and study to a special branch of learning. However, he might have acquired such knowledge by practice, observation or careful study. It was further held that in order to bring the evidence of a witness, as that of an expert, it has to be shown that he has made a special study of the subject or acquired a special experience therein or in other words that he is skilled and has adequate knowledge of the subject.

Rule 702 of the Federal Rules of Evidence of United States also defines the expert witness as a witness who on the basis of his knowledge, skill, experience, training or education, able to testify in the form of opinion that his opinion is based on such specialized knowledge and experience and is based on sufficient facts and data and is the product of reliable principles and methods and apply these method on reaching to conclusion which helps the trier of fact to understand and in determining the fact in issue.

Sec. 45 of Indian Evidence Act, 1872 laid down that *When the court has to form an opinion upon a point of foreign law, or of science, or art, or as to identity of handwriting or finger impression, the opinion upon that point of persons specially skilled in such foreign law or science or art or in questions as to identify of handwriting or finger impression are relevant facts, such persons are called experts.*

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Indian evidence uses the term ‘science or art’ but these can’t be interpreted in a narrow sense. As V. Kesava Rao in his books said that ‘it is apprehended that these words are to be broadly construed, the term science not being limited to the higher sciences and the term art not being limited to the fine arts, but having its original sense of handicraft, trade, profession and skill on work, which, with the advance of culture, has been carried beyond the sphere of the common pursuits of life into that of artistic and scientific action.9

Sometimes, it is difficult to understand whether a particular question in a case is of scientific nature or not, whether the question is such that is determined by expert or not then answer can be given by answering the question is the matter in issue before the court is such that inexperienced person is not capable of giving the answer to it or is incapable in forming a correct opinion upon it. Is the court needs the help of expert for knowing the answer on facts and is it so far partakes the character of science or art which requires a study, knowledge and experience in that particular fact. In order to establish a claim or defense in some cases, an expert witness is the necessity of the case so that claims and defense can be legally established. But in some cases expert only serve as an indispensable force of persuasion, may not be legally required.

From the beginning of the scientific evidence in the courts there is a heated discussion on the entry of Junk science in the courtrooms. The term Junk Science was first coined in Huber Galileo’s Revenge: Junk Science in the Courtroom. The term junk science refers to the abuse of science and scientific terminology in the courtroom setting by importing irrelevant or accurate evidence to advance a party’s arguments.10

But now the courts have allowed the scientific and technological evidences in the courtroom. For that these experts have to go through the test of relevancy and admissibility of evidence. The two main requirements that a party must satisfy in order to be permitted to adduce expert evidence in court are:-11

i) It must be shown that the expert evidence is necessary in the circumstances in that it is relevant and that it has probative value.

ii) It must be established that the witness is a qualified expert.

11. Id at Pg. 40.
The two major cases which deals with the reliability of scientific and technical expert evidence is *Fyre v. United States*\(^\text{12}\) and *Daubert v. Merrell Dow Pharmaceuticals Inc.*\(^\text{13}\). In the *Fyre case* the court defined the method for state and federal courts to treat with the question of the admissibility of scientific and technical evidence and gave the theory of general acceptance in the following words:

*Just when a scientific principle or discovery crosses the between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.*

And the *Daubert case* the Court said that the appropriate standard for admissibility of scientific was laid in Federal Rules of Evidence 702; which demanded that scientific testimony be 'not only relevant but reliable' and the wording of this Rule 702 read as:

*A witness who is qualified as an expert by knowledge, skill, experience, training or education may testify in the form of an opinion or otherwise if (a) the expert’s scientific, technical or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue, (b) the testimony is based on sufficient fact or data, (c) the testimony is the product of reliable principles and methods and (d) the expert has reliably applied the principles and methods to the facts of the case.*

*Interamerican Transport System Inc. v. Canadian Pacific Express & Transport Ltd.*\(^\text{14}\) Feldom J. said that:

*An expert witness is called to provide assistance to the court in understanding matters which are beyond the expertise of the trier of fact. Such a witness is not to be an advocate for one party, but an independent expert.* Justice Feldom further stated that:

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The court will examine the demeanor of an expert in the way the evidence is given, in particular whether the expert takes on the role of an advocate for one side, or remains objective, in weighing the evidence and attributing value to the opinion. If the expert does adopt the attitude of a neutral, then the fact that he is being paid or that the defendant is his client will cause little or no concern, but that will not be the case if he appears to lose his neutrality. In that case the value of his evidence can diminish significantly.

The expert witness is expected to put before the Court all materials inclusive of the data which induced him to come to conclusion and enlighten the court on the technical aspect of the case by examining the terms of science, so that the court, although not an expert, may form its own judgment on those materials after giving due regard to the expert’s opinion, because once the expert opinion is accepted, it is not the opinion of the medical officer but that of the Court. 15

Expert’s duty is toward the court, so it is the duty of the expert to furnish the court with all the material on the basis of which court can form its own conclusion. He is to explain the point clearly and in simple language to the court. He is to find the truth and to put those points and reason before the court, on the basis of which he or she makes that particular opinion. He/or she is to advice and assists the court in performing the function of providing the justice to the aggrieved party not to give a judgment. Basically two main function are performed by the expert witnesses first one is of the function of scientific or forensic function by collecting, testing, evaluating the evidence that either collected by him/her or either sent to him/ her; and second is the function of communicating and educating the expert by explaining the scientific criteria to the judge and jury, explains the methods and reason for reaching to such an opinion.

Expert’s opinion is of advisory nature. It is taken into evidence with corroboration with other evidence. Evidence of the expert who are not well qualified and experience in the field for which his/ her opinion is needed. A person is not eligible to give witness as an expert until and unless he or she has any special knowledge, intelligence and experience. Expert’s opinion is not admissible unless it was not supported by the statement and reasons for the base of that particular opinion, and

where the matter before the court is of such a nature that courts itself can on the basis of other evidence makes an opinion, expert’s evidence is inadmissible.

Opinion of an expert as an evidence can be taken both in the civil and criminal cases. In civil cases like those of which related to issue of paternity, property rights, on documentation etc. opinion of experts in the field of DNA, handwriting is admissible. And in criminal case like murder, rape, on the question of death whether it is natural, suicide or murder opinion of expert from the field of DNA, entomology, odontology, pathology, fingerprints etc. is admissible.

“The Courts, normally, look at expert evidence with a greater sense of acceptability, but it is equally true that the courts are not absolutely guided by the report of the experts, especially if such reports are perfunctory, unsustainable and are the result of a deliberate attempt to misdirect the prosecution.”16

As Stephen in his Digest of The Law of Evidence says that the words ‘science or art’ include all the subject on which a course of special study or experience is necessary to the formation of an opinion. With the advancement in science and technology criminals are using these advancements for commission of crimes. It now the demand of time and justice that the participants of justice system must use the advancement of science, technology and their application in reaching their goal that is of providing the justice to the victim. As discussed in Chapter III, concept like entomology, odontology, pathology, internet crimes, Deoxyribonucleic Acid, fingerprint (dactyloscopy) are the emerging trends in expert evidence and investigation

Forensic odontology is the study of dental evidence. It is the application of dental science to legal investigations. It is the bite mark evidence which is left by the criminal at the scene of crime either on the victim body or on edible products. The proper handling, examination and evaluation of dental evidence and latter on which is presented in the interest of justice is forensic odontology. Bite mark is the representative pattern left in an object or on tissue by the dental structures of living being. Forensic odontologist, who is the dentistry expert, helps the investigating team and judiciary by his/her skill and training in identifying the accused in different crimes. Forensic odontologists helps in identifying those persons who cannot be identified by

face recognition or by any other means like by other person, fingerprints etc., helps in identifying the bodies in mass disasters and fatalities, in assault or suspected abuse, in estimating age of the found skeletal. For this purpose forensic odontologist uses the comparative method or photographic method of dental identification, post-mortem dental profiling and DNA in dental identification.

Entomology is the study of insects and arthropod biology in criminal matters. Forensic entomology is primarily associated with death investigations; however, it may also be used to detect drugs and poisons, determine the location of an incident, detect the length of a period of neglect in the elderly or children, and find the presence and time of the infliction of wounds.\(^{17}\) It is the study of insects associated with a human corpse in an effort to determine elapsed time since death.\(^{18}\) Forensic entomology is sub-divided into urban forensic entomology, stored-product forensic entomology and medicocriminal entomology. Urban forensic entomology studies how the insects affect human and the surrounded environment. Law suits which deals with the misuse of pesticide and which involve the arthropods in dwellings or as and garden pests in the subject matter of urban forensic entomology. Stored-product forensic entomology generally deals with arthropod infestation or contamination of a wide range of commercial products e.g. beetle or their parts in candy bars, flies in ketchup. Medicolegal forensic entomology deals with involvement of insects and arthropods in colonies, violent crimes, physical abuse etc. Medicolegal or Medicocriminal entomology is where insect development and succession on a corpse are used to estimate how long the decedent has been dead.\(^{19}\)

Evidence from medicocriminal entomology which is increasingly involved with the judicial system can affect investigative or legal proceeding in various ways. Oral and written anecdotes pertaining to insects may be useful as investigators piece together a present or retrospective look at pertinent circumstances.\(^{20}\)

Forensic pathology is the examination of cadaver for determining the cause of death. It deals with discovering manner and cause of death whether it is homicide or suicide, accidental or natural and what the ultimate or immediate reason is for death. Forensic pathologists, who are specially trained and is expert in the investigation and evaluation of such cases does this by the study of medical history, by performing of autopsy, by collecting and tracing of evidence from the dead body for further analysis and by evaluation of crime scene. With regard to criminal investigation forensic pathologists play a wider role, they investigate all the deaths due to violence, known or suspected, unexpected or unexplained, occur in suspicious circumstance or in custody, by diseases. In cases of medical negligence, sexual assault, domestic violence and torture, the role of the forensic pathologist is vital. So, a forensic pathologist plays a key role in criminal cases as well as in civil cases mostly involving insurance and other claims.\(^\text{21}\)

Both in the civil and criminal cases scientific evidences plays a vital role and DNA is one of them. DNA is a powerful tool in the hands of investigating agencies in solving the cases. DNA is the abbreviation of Deoxyribo Nucleic Acid. It carries the genetic code and is also called the blueprint of an individual. It varies from individual to individual but in monozygotic twins who come forth by the division of a single fertilized egg DNA structure is the same. Monozygotic twins are also called identical twins, they are genetically identical. DNA is a complex molecule, has a double helix structure, which can be compared with a twisted rope ‘ladder’. These ladder strands are connected to each other via nucleotide rungs. Adenine and Thymine pair forms one rung, while guanine and cytosine form another rung of the ladder. In this way, one DNA molecule can have lakhs of these base pairs in it. This famous double helical structure was described by James Watson and Francis Crick in 1953, both, these scientist were awarded by the Noble Prize in the year 1962. The human genome is comprised 3.2 billion base pairs. Although any two human beings are at least 99.9 % genetically identical, the remaining 0.1 % of portion differs from person to person. The differences are due to the number of times that shorter sequence of the base pares repeat in tandem, over and over. These repetitions are known as variable numbers tandem repeats (VNTR). These differences

are used by the scientists examine in the process known as DNA fingerprinting to determine identity and heritage.

DNA fingerprinting or DNA Profiling is a technique which is employed by forensic scientist, in identification of individuals by using a small amount of genetic material which can be extracted from blood, hair, salvia, semen, body tissue, post-mortem sample, bone marrow etc. from sample collected from the crime scene. It is an ideal way an individual to individual and helping the legal process. In Harjinder Kaur v. State of Punjab And Others on 1st Aug., 2012 Court quotes the wording Justice Abhichandani as DNA evidence can help to bring home the quilt, acquit the innocent, or exonerate those wrongly convicted. It is not only helpful to the judicial system in strengthening the cases against suspect, convicting the accused but also exonerating the innocent even after their conviction as in Frank Lee Smith v. State of Florida case where Framk Lee, who was convicted and sentenced to death for the rape and murder of Shandra Whitehead, 8 year old girl, he was cleared from the charges after fourteen years on Florida death row and death due to cancer on the basis of DNA testing. DNA test not only cleared Frank Lee but identified Eddie Lee as the true perpetrator, as his DNA matched with the evidence found on the body of Shandra Whitehead not of Frank Lee Smith.

With the development of computer technology, man’s way of communication develops. Cybercrime is also called computer crime, the use of computer as an instrument to further illegal ends, such as for committing fraud, includes improperly accessing a computer, system or network, includes taking, modification, damaging, using, disclosing, copying of programs or data, includes the stealing of an information service from a provider etc.

The internet which is widespread information revolutionized the world of computer and communications. Internet is global network, it is a network of network which provides a variety of information and communication facilities, allows the transfer of data and information easily from any part of the world. As a result whole world get connected, with it the traditional form of committing the crime is also revolutionized. Now crime is not only limited to local or national level it become

international and committed not only through traditional way but through internet. This committing of crime through internet is called internet crimes. It is an illegal act or practice that involves and takes place on or through internet. And the person who has an intensive knowledge and experience in this technology and digital base and helps in solving the cases of internet crime on the basis of his or her knowledge and experience is this particular field is internet expert. Internet crime includes the crime like sexual abuse of child, stalking, cyber harassment, internet bomb threat, cyber terrorism, email phishing etc.

Another type of expert evidence is that of fingerprint (dactyloscopy). It is the evidence which uses the pattern of complex ridges and design on the surface of one’s fingers as an evidence to identify the identity of person. A fingerprint is the pattern on the inside of the finger in the area between the tip and the first joint and stays the same from the day of a person’s birth to day they die until and unless fingers are destroyed by any reason like burning, amputation, surgery or disease. Dactyloscopy is the study of the structure if these fingerprints for the criminal identification and investigation. And the fingerprint expert is one who in the identification and comparison of fingerprints applied his or her skill, experience and fingerprint science in investigation to the case. Fingerprints vary from individual to individual as the fingerprints are unique, permanent, universal and inimitable. Fingerprints are differentiated through the arches, loops, whorls and composites which are present with a different pattern in different fingers. Man’s fingerprints are also called permanent and unforgettable signatures as they remain from birth to death with human even after cutting or rubbing they are not destroyed, they take their original shape once the wound heels and there is no resemblance the fingerprint pattern made by fingerprint pattern of same hand of one person or with other person’s hand, even the monozygotic twins which share the same DNA do not have the same fingerprints.

Fingerprints help the investigating team consists of fingerprints experts in the identification of criminals as they left their fingerprints at the crime scene by touching due to the sweat gland in the friction skin of hands; in identifying the habitual offenders by the comparing the fingerprints on the scene from the already existing records; by establishing identification in kidnapping cases, mass disasters, bank forgeries etc.

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Monir stated that handwriting is a useful test of identity. It is asserted that in every person's manner of writing there is a certain distinct prevailing character which can be discovered by observation, and being once known, can be afterwards applied as a standard to try the other specimens of writing, the genuineness of which is disputed. It is a type of symbols, a written character used by humans for communication. Many factors like family influence, schools, teachers, friends, gender and physical causes etc. has its impact on the development on the individual handwriting. Everyone has their own style of writing which distinguishing it from every other person's handwriting. It is individualistic to human and makes a differences with other due to styles and forms of formation of letters or writing, the writing skill of the writer, connecting strokes, movements of pen, embellishment, spacing between words, speed and rhythm of writing, style of pen holding, pen lifts and separation; arrangement of words etc. And the handwriting experts is the person well skilled and trained in the analysis of handwriting and looks for the individual traits in handwriting in determining whether the writing in question is that of the person whom it is supposed or of somebody else. As the handwriting analysis includes the closely comparison of individual handwriting characteristics by those of sample handwriting, it requires the skilled and experienced handwriting experts, who bases their decision on the similarities or dissimilarities between the two specimen handwritings.

But these expert evidences has also to go through the test of relevancy, admissibility and probative value as discussed in Chapter IV. Rule of relevancy means what facts may be proved before the court. relevant under Sec. 3 of Indian Evidence Act, 1872 defines that one fact is said to be relevant to another when one is connected with the other in any of the ways referred to in the provision relating to the relevant facts. Sec. 5 to 55 deals with relevancy of facts. Sec. 5 clearly states that evidence may be given, in any proceedings, of such facts as are declared to be relevant and of no others. The relevant facts are those which are in the eye of the law so connected with the facts in issue that they render the latter probable or improbable (Sec. 6 to 55) the definition of ‘relevant’ given under Sec. 3 in the Act is incomplete. Sec. 6 - 55 deals with relevancy of facts. Sec. 3 merely declares what is relevant. A fact in issue is a condition precedent and is an essential factor in determining rights and liabilities while a relevant fact is not an

26. Supra note 7 at Pg. 240.
27. Supra note 7 at Pg. 45.
essential element in the determination of rights and liabilities. A relevant fact merely renders the existence or non-existence of a right or liability or of a fact of a thing probable or improbable.\textsuperscript{28}

Sir James Fitzjames Stephen in his book \textit{A Digest of The Law of Evidence}\textsuperscript{29} also said that 'The word relevant means any two facts to which it is applied are so related to each other that according to the common course of events one either taken by itself or in connection with other facts proves or renders probable the past, present or future existence or non-existence of other'. So, the word relevant has two meanings, one is connected and other is admissible. And word relevant fact means the fact which has a certain degree of probative force.

Relevancy is of further divided into two types: logical relevancy and legal relevancy. When one fact is connected with another fact it is logically relevant and if the law declares it to be relevant it is legally relevant. It is not necessary that all the logically relevant facts are not necessarily legally relevant facts. Legal relevancy requires a higher standard of evidentiary force.

The word relevance includes both the logical and legal relevancy. The word relevant, as defined and used in the Act consists of two meanings connected and admissible. In relation to connection it means relevancy is logical and in other it means it is legal. But relevancy and admissibility as used synonyms are distinct and different in their legal implications; sometimes facts which are relevant may not be admissible like communication made between client and advocates and between husband and wife during marriage though are relevant but not admissible under Sec. 129 and 122 of the Act.

Admissibility is a quality standing between relevancy and probative value. On the one hand as a proof, or weight of evidence, on the other hand, admissibility signifies, that all the particular fact is relevant and something more – that it has also satisfied all the auxiliary tests and extrinsic policies\textsuperscript{30} Admissibility itself is the answer to the question whether the evidence is relevant or is there any value for the legal debate, as well as a variety of other factors such as the status of the expert witness, as it itself

\textsuperscript{30} Supra note 28 at Pg. 351.
means the same. Admissibility is not based on logic like relevancy which is based on logical probative, but on law and strict rules. It presupposes relevancy and the evidence which is relevant is only admissible irrelevant facts are not admissible.

Relevance, is not any inherent characteristic that is present in evidence but it is the tendency of evidence to prove or disprove the essential elements of the case and must have probative value to make those elements of the case proved or disproved as probative evidence in law is to ‘seeks the truth’, probative is used to signify that which is ‘tending to prove’. Generally in law of evidence that is not probative is inadmissible and the rules of evidence permit it to be excluded from a proceeding or stricken from the record of evidence permit it to be excluded from a proceeding or stricken from the record ‘if objected to by opposing counsel’.31

Evidence which tends to prove an issue to be admissible must have a probative value. If the evidence is sufficiently useful to prove the something related to the case before court it has a probative value in the eyes of law. Court decides the probative value of any evidence on the harm and usefulness of result which comes from its admission. If it is harmful then it has not probative value and is inadmissible. Thus, probative value of the evidence is the weight given to it after being judged having regard to the facts and circumstances of case.

The real value of expert’s evidence consists in rightful inferences what he draws from what he merely surmises. Expert evidence is the only piece of evidence and weight to be given to it has to be judged along with other evidences of this nature is ordinarily not conclusive. Such evidence therefore cannot be taken as substantial piece of evidence unless corroborated by other evidence.32

The general rule relating to the opinion evidence is an exclusionary one - a witness is not entitled to give an opinion or draw inferences from facts observed, they can only testify as to the facts observed by them personally and expert evidence operates as a limited exception to this strict exclusionary rule.33

An expert testimony ought to be a witness above “party politics” and is infact for all parties. It is immaterial which party calls him: his clear duty is to the court, justice in

33. *Supra note 10.*
matters depends largely upon the cogency of the reason behind it.\textsuperscript{34} In \textit{Haji Mohammad Ekramul Haq v. State of West Bengal},\textsuperscript{35} the Supreme Court of India stated that High Court has rightly not placed reliance upon the expert opinion, if is not supported by any reason the court may reject it.

In \textit{Baines v. Ram Sahai}\textsuperscript{36} the court observed that the evidence of an expert has to be tested like that of, any other witness, for even expert witnesses are liable to make mistakes. At the same time, if a person with special professional qualifications, such as a doctor or an engineer, is called in to make professional examination of a person or a building, and is then asked to give the result of his examination as evidence in Court, it is hardly fair to treat him as being on the same footing as those persons who may be said to make a profession of giving evidence; nor is it necessary to suppose that he must necessarily be suffering from undue bias merely because he has professional qualification.

However, entomological opinions by written report (usually discoverable by the opposition), affidavits, deposition, or in court testimony represent formal procedures ultimately characterized by testimony under oath, where prescribed for perjury attach.\textsuperscript{37} If the entomological evidence is to have any impact on the outcome of litigation, it somehow must find its way into the proceedings.\textsuperscript{38}

Forensic odontology has established itself as an important and indispensable science in medico-legal matters and expert evidence through various reports which have been utilized by courts in the administration of justice. In the case at hand, the report is wholly credible because of matching bite marks with the tooth structure of the accused persons and there is no reason to view the same with any suspicion.\textsuperscript{39}

Although the law regarding to direct DNA Test, the Apex Court has observed that DNA Test is not to be directed as a matter of routine and only in deserving cases such a direction can be given.\textsuperscript{40}

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\textsuperscript{34} \textit{Lilla v. Bejoy}, 1925 Cal. 768. \\
\textsuperscript{35} AIR 1959 SC 488. \\
\textsuperscript{36} AIR 1940 Lah 505. \\
\textsuperscript{37} Supra note 20 at Pg. 453-454. \\
\textsuperscript{38} Id at Pg. 454. \\
\textsuperscript{39} \textit{Mukesh & Anr v. State of NCT of Delhi & Ors.} S.C Criminal Appellate Jurisdiction, Cri. App No. 607-608 of 2017, Para 242. \\
\textsuperscript{40} \textit{Banarsi Dass v. Teeku Dutta}, (2005) 4 SCC 449: 2005 (A) JT (SC) 627. \\
\end{flushleft}
In *Harjinder Kaur v. State of Punjab And Others* on 1 August, 2012\(^{41}\) court said that DNA evidence is admissible when it is relevant to the fact in issue and is not otherwise excluded by the statute or the High court Rules and orders. Evidence is relevant when it has such a relation to the fact in issue as to induce belief in its existence or non-existence. Sec. 45 which governs the admissibility of expert testimony, provides that the opinion of a witness on a matter requiring special knowledge, skill, experience or training which he is shown to possess can be received in evidence. The section does not pose any legal obstacle to the admissibility of DNA analysis as evidence. DNA analysis is admissible as evidence even on collateral matters when to tends in any reasonable degree to establish the probability or improbability of the fact in issue as per provisions of the Evidence Act.

In *The State v. Karu Gope And Anr.*\(^{42}\) the Patna High Court concludes, ‘As to the probative value of the opinion of an expert on fingerprints, it must have the same value as the opinion, of any other expert, such as a medical officer, etc. In each case the evidence is only a guide to the Court to direct its attention to judge of its value. The court is at liberty to use its own discretion and to come to a conclusion either in affirmance or differing from the view taken by the expert.’ In this case Court also stated that “the expert must keep some note on the points where he finds tallying at the time when he makes his examination of the documents for the purpose of expressing his opinion. The setting out of the reasons at length will clarify his ideas and it will furnish a valuable guide to the parties and to the Court in testing the value to be attached to that opinion. It would also be fairer to the person against whom the opinion is to use that the reason for that opinion are definitely expressed.”

CCTV footage would have been best evidence to prove whether the accused remained inside the room and whether or not they have gone out. CCTV footage is a strong piece of evidence which have indicated whether the accused remained inside the hotel and whether they are responsible for the commission of crime. It would have also shown whether or not the accused had gone out of the hotel. CCTV footage being a crucial piece of evidence, it is for the prosecution to have produced the best evidence which is missing. Omission to produce CCTV footage, in our view, which is the evidence, raises serious doubts about the prosecution case.

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42. 1954 Cri LJ 201.
On the question whether the opinion of expert as and evidence is to be taken as an admissible and relevant fact, it is to be decided and depends on the examination of such an expert by the court. As it is already discussed that the expert evidence is only of advisory nature, court is not bound by it. It is the duty of the expert to give just an opinion and not a decision which is the work of court. Expert has to put his opinion before the court with reasons of his/ her having such an opinion. His/ her opinion needs corroboration with other material facts and is cross-examined before reliability.

I am concluding with the words of Dr. A. P. J. Abdul Kalam: Our judicial system is dynamic and an institution which is throbbing with life catching up societal and technological evolution. As the ultimate protector of human rights and the final resort for dispensation of justice, the citizens of India look up to this institution with hope. Our society is going through a unique dynamics due to the shortage of leadership with nobility. The only hope the nation cherishes and looks to is the judiciary with its excellence and impeccable integrity. We should do everything to make the judicial system succeed.43 So, efforts should be done to the make the judicial system more and more effective and this can be possible only justice system is equipped with new equipments of science and technology.

SUGGESTIONS:

Not much work is done on the expert evidence from the various fields in India. New concepts and theories are not adopted by the India Judicial System – from investigation process to the court. Like in the case of Fiza Mohammad, who got her name changed from Anuradha Bali to Fiza Mohammad after getting under Muslim law to Chander Mohana alias Chand Mohammad. Newspapers of 6th and 7th Aug, 2012, was hit by the news related to death of Fiza Mohammad, every newspaper published that maggots were crawling on her body, her body was maggot-infested. But after that there is no news about whether the forensic entomologist had come to investigate, is there any work by them in this case.

State and its law is to provide the protection to its citizens and their property. Both are to provide the punishment and decide the liabilities of the guilty person and to protect the innocent rights. Courts are to find out the truth in the case before it. In the

43. Kalam, A. P. J. A., Address During the Launch of Computerization of Courts, New Delhi, July 2007, Pg. 15.
judicial system any case begins since from the beginning when any case is registered or the police get the information of any offence, then the process of investigation begins and the evidence are collected from the crime scene and these evidences and witnesses are brought before the court, on which after hearing court gives its decision. Whole the process of justice system is based on the investigation, evidences and witnesses. Different - different styles of criminality occurs, criminals adopted new methods of committing the crime. So some my suggestions are:

1) Due to the development in the field of technology and science criminality has also tremendously changed. So from the beginning that is from the investigative stage new inventions and methods of science and technology is to adopted by the investigating team.

2) To make the investigative team more effective they should be well trained and well equipped with the new technological and scientific tools.

3) Evidences have an important part to play in the process of case to come to an end. For that evidence presented before the court is to be not only necessary and sufficient but also to be certain and reliable.

4) The heinous crimes depends upon the evidences from the crime scene, old method of doing the search and collecting the evidences should be replace by new methods. New concepts of forensic entomologist, odontologist, internet specialists etc. should be involved in this process.

5) The definition and opinion of expert testimony as defined under Sec. 45 in Indian Evidence Act should be amended. With the word ‘science or art’ the word ‘technology and any other specialized field’ should be added.

6) And the opinion of the persons who are experts in these fields should be adopted or admitted in the courtroom as an expert.

7) More and more forensic laboratories are to be established all over India. Merely declaring the 26th June as forensic day is not sufficient.
These laboratories should be fully equipped with the new instruments and technologies.

8) At the national and state level regulatory and monitoring bodies should be established to regulate and have control over the laboratories.

9) The court should while allowing the expert witness in the court should properly assess the qualification and competency of an expert. Court has to take the full notice of his education, experience and practice in the particular field.

10) Expert should give only the opinion not the decision before the court through the submission of report. The report should consists of:-

   i) Firstly it should be directly addressed to the court not to the any party of the case. May be is from any party to the case but report is to be in the name of court.

   ii) Name, Qualification and experience of the expert

   iii) Report should mention all the material used by the expert in forming that particular opinion.

   iv) Should include the information about the procedure, methodology and test adopted by the expert

   v) Should include the result and details of that test or experiments conducted by the expert during investigation of evidence.

   vi) Should contain all other relevant information regarding the test and experiment.

   vii) Techniques adopted should be clearly explained in the report.
viii) And if the expert takes the help of any literature the information about that literature should be given.

ix) Should clearly mention if the expert has, regarding his or her relationship with any party to the case in which he or she is appointed as an expert.

x) Should consist of declaration by the expert about the contents of the report that they are true and that the expert observe all the standard relating to it.

xi) There should be proper authenticity of report. Report must be properly stamped, signed and dated by the expert.

11) Expert report should be disclosed to the opposite party and sufficient time should be given to them to study the report.

12) Expert should be examined like other witnesses. Opposite party to the case should be given the opportunity to cross-examine the expert witness. Without the cross-examination expert evidence should not be made admissible.

13) An expert might be appointed by any party to the case but expert’s first duty should always remains towards the court.

14) Expert should remain unbiased and impartial in the court

15) Expert is to explain the methods and test adopted by him/her in easy and clear and understandable language to the court. Here, expert is to act as an educating expert.

16) Expert is not to usurp the role of judge or an advocate in the case in which his/her expertise is called.
17) Expert is only to state about his or her opinion which he or she has made relating to the issue for expertise of expert is needed not on the other issues related to the case.

18) A special Act which mentions the qualification, ethics, duty and controlling body over the expert and contains the interpretation of different words which in use by the experts should be drafted.

19) Training can be given to the advocate and judges in forensic who though not from the scientific and technical field are still interested in it.

20) One more subject can be added in the curriculum of legal education i.e. forensic who give the basis knowledge about the admissibility, relevancy and dealing with such evidence in the courtroom. And this will be helpful to the persons who are in the field of legal system to deal with expert opinion but have no scientific and technical background.

21) During the police meet at the zonal, state or national level forensic experts from various fields are to be called to give the information related to handling, collection of evidence from the crime scene which of forensic expert interest.

22) Proper training should be given to police personnel's regarding the handling of evidences at the crime scene so that important evidence cannot be washed off, so that forensic expert can be called at the proper time before the destroying of such evidences.

23) This must be included in their training duration because they are the first who come at the crime scene.