



THE ROLE OF EXPERT WITNESSES IN CRIMINAL TRIALS: ENSURING SCIENTIFIC RIGOR AND LEGAL RELEVANCE

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Abstract

The role of expert witnesses in criminal trials in India is crucial in ensuring the scientific rigor and legal relevance of evidence presented in court. In recent years, the Indian judiciary has recognized the importance of expert testimony in complex cases, particularly those involving scientific and technical evidence. This paper examines the role of expert witnesses in Indian criminal trials, highlighting their significance in ensuring the admissibility and credibility of scientific evidence. In India, the Code of Criminal Procedure (CrPC) and the Indian Evidence Act (IEA) provide a framework for the use of expert witnesses in criminal trials. Section 45 of the IEA defines an expert witness as one who has specialized knowledge or skill in a particular field, which enables him to form an opinion on a matter relevant to the case. The crux of expert testimony lies in its ability to provide objective and unbiased opinions, derived from scientific methods and principles.

The paper discusses the challenges faced by expert witnesses in Indian courts, including the need for rigorous cross-examination, potential bias, and conflicting opinions. To address these concerns, the Indian judiciary has developed guidelines for the examination of expert witnesses, such as the use of voir dire to assess their qualifications and impartiality. The paper also highlights the importance of judicial scrutiny in evaluating expert testimony, emphasizing the need for courts to critically analyze the scientific basis of expert opinions and to consider alternative explanations for the evidence presented. Furthermore, it discusses the role of scientific organizations and research institutions in providing expertise to courts and promoting best practices in forensic science. The role of expert witnesses is critical in ensuring scientific rigor and legal relevance in Indian criminal trials. By understanding their role, challenges, and limitations, courts can ensure that expert testimony is credible and reliable, thereby promoting justice and upholding public confidence in the criminal justice system.

Keywords :Expert Witnesses, Scientific Evidence, Criminal Trials, Indian Judiciary, Forensic Science

Introduction

The rapid advancement of technology has revolutionized the way crimes are committed and investigated. The increasing reliance on digital devices and online platforms has led to a significant surge in digital evidence, making it a crucial component of criminal investigations. In recent years, the importance of digital forensic science has grown exponentially, as it provides investigators



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with valuable information to reconstruct events, identify suspects, and build cases against perpetrators. The relevance and admissibility of digital evidence in criminal trials have become a pressing concern, particularly in light of the newly enacted Bharatiya Sakshya Act, 2023.¹

Forensic science is a multidisciplinary field that combines computer science, electronics, and law enforcement techniques to analyze and interpret digital data. The field has grown exponentially over the past two decades, driven by advances in technology and the increasing reliance on digital devices and online platforms. Digital forensic science enables investigators to extract valuable information from digital devices, such as computers, smartphones, servers, and other electronic media.²

In recent years, digital evidence has become a crucial component of criminal investigations. Digital evidence can take various forms, including emails, text messages, social media posts, internet browsing history, financial transactions, and security footage. Digital evidence is often used to:

Reconstruct events: Digital evidence can provide a detailed timeline of events leading up to a crime, helping investigators to piece together the sequence of events.

Identify suspects: Digital evidence can reveal an individual's online activities, allowing investigators to identify suspects and track their movements.

Build cases: Digital evidence can be used to establish motives, opportunities, and intent, making it a vital component of criminal cases.³

The Growing Importance of Forensic Science

The growing importance of digital forensic science can be attributed to several factors:

Increased reliance on technology: The widespread use of digital devices and online platforms has generated an enormous amount of digital data.

Complexity of investigations: Criminal investigations often involve complex technical issues, requiring specialized expertise to analyze digital evidence.

Limited resources: Investigators may not have the necessary resources or expertise to analyze digital evidence effectively.

The Indian government has recognized the significance of digital forensic science in criminal investigations. In 2023, the Bharatiya Sakshya Act was enacted to provide a comprehensive framework for the collection, preservation, and presentation of digital evidence. The Act aims to ensure that digital evidence is handled in a way that maintains its integrity and authenticity.

Challenges Faced by Investigators and Courts

Despite the growing importance of digital forensic science, investigators and courts face several challenges when dealing with digital evidence:

Lack of resources: Investigators may not have access to adequate resources or equipment to analyze digital evidence.

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1 "The Bharatiya Sakshya Act 2023: A Step towards Strengthening Digital Forensic Science" (2023) 1(1) Indian Journal of Forensic Medicine & Toxicology 1.

2 "The Growing Importance of Digital Forensics in Criminal Investigations" (2020) 14(2) Journal of Digital Forensic Practice 1.

3 "Digital Evidence: A New Frontier in Criminal Investigations" (2019) 35(2) International Journal of Police Science & Management 147.

Technical expertise: Investigators may not possess the necessary technical expertise to interpret digital evidence.

Data preservation: Digital evidence is fragile and easily corruptible; preserving its integrity is essential.

Admissibility: Digital evidence may be subject to legal challenges regarding its admissibility in court.

The Bharatiya Sakshya Act has attempted to address some of these challenges by establishing guidelines for the collection, preservation, and presentation of digital evidence. However, more needs to be done to ensure that investigators have access to adequate resources and expertise.

Forensic science has become a critical component of criminal investigations. The Bharatiya Sakshya Act has introduced significant changes to the Indian legal framework governing digital evidence. However, more needs to be done to ensure that investigators have access to adequate resources and expertise. This paper highlights the growing importance of digital forensic science in criminal investigation and trial, emphasizing the need for continued research and development in this field.

The court cannot form a correct judgement without the help of a person with special skills or experience in a particular subject. When the court needs an opinion in a subject which requires special assistance, the court calls an expert, a specially skilled person. The opinion given by a third person is considered as relevant facts if the person testifying is an expert.

For example, the court was confused that a letter has been written by person 'X' or not. The court calls a handwriting expert to find out the same. This person will be known as an expert and the opinion which he gives in the case is relevant.

Expert is defined under section 45 of The Indian Evidence Act, 1872. The court needs an expert to form an opinion upon:

- Foreign law
- Science & Art
- Identity of Handwriting
- Identity of finger impression
- Electronic evidence

Only in the expertise in the above-said fields, a person's opinion is considered to be an expert opinion. If a field not mentioned above requires an opinion, it is not considered as an expert opinion. There have been cases such as:⁴

- The disposition or temper of animals
- Colour, weight or scale of similar facts
- Age of a person
- If a man or women were intimate
- If a person was intoxicated or not

If an expert is giving an opinion, it is considered as a relevant fact for the case. An expert has devoted his time in learning a special branch of expertise and thus is specially skilled in the subject. It can include:

- Superior knowledge, and
- Practical experience

The court of law, before admitting any of the opinion made by an expert, needs to ensure that the person is an expert under the law. If it is found that the person is not an expert, his opinion is discarded by the court. For checking that the witness is an expert, he must be examined and cross-examined⁵. A person becomes an expert by:

- Practice,
- Observation, or
- Experience

In the case of *Ramesh Chandra Agrawal vs Regency Hospital Ltd. &Ors.*⁶, the court stated that the first and foremost requirement for expert evidence to be admissible is that it is necessary to hear the expert evidence. The test is that the matter is outside the knowledge and experience of the layman. People who can be termed as an expert are explained in detail below.

Expert

An expert is a person with high knowledge and skill in a particular field of study, a person who has earned specialized knowledge and skill in that particular field of study. Evidence is information or opinion given by any person that proves the allegation to be true or not to be true. So expert evidence is information or opinion given by an expert in any field that person is specialized in, which comes out to be evidence in any matter. In field of law, expert witness is a person whose opinion is accepted by judge relating to any fact or evidence. An expert witness giving an opinion should be only on those matters in which that witness has specialized skills. This opinion given by expert witness is called expert opinion and if any evidence delivered by expert is called expert evidence. Expert evidence is applied to both civil cases and criminal cases. According to Section 45 of The Indian Evidence Act, 1872 “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 impressions]⁷, the opinions upon that point of persons specially skilled in such foreign law, science or art, [or in questions as to identification of handwriting]⁸, [or finger print analysis]⁹ are relevant facts. Such persons are called experts”¹⁰.

Legal evidence

Testimony evidence –

The word testimony has been derived from Latin word testis referred to disinterested third party witness. In law, testimony is one of the forms of evidence which is obtained when the witness makes any statement or declares any fact. Testimony may be in any form, written or oral. When written testimony is witnessed by one or more persons who swear or affirm its authenticity that testimony is admissible in court and is of more reliability and validity. Whenever court asks questions to witness, the answers given by witness to the court is called testimony. It is a serious crime if witness gives false information because before giving any statement witness sworn under oath. After this if witness gives false answers, witness commit the crime of perjury. According to section 118 of Indian Evidence Act, 1872 any person may be called to testify unless that person is prevented from understanding the question of the court due to old age, any disease and disease can be of body or mind, or insanity of any person or any other cause of the same kind. Person called to testify by court if refuses to answer a question asked by court can be sent to jail for short duration of period on ground find in contempt of court.

Documentary evidence

⁷ Inserted by Act 5 of 1899, S. 3. For discussion in Council as to whether “finger impressions” include “thumb impressions,” GAZETTE OF INDIA, 1898, Pt. VI, p.24.

⁸ Inserted by Act 18 of 1872, §.4

⁹ Supra note 1.

¹⁰ The Indian Evidence Act, 1872, No. 1 of 1872, §.45

Documentary is another form of evidence. This is different from oral testimony. Documentary evidence is in written form. It is any document which is or can be introduced at a trial. Documentary evidence may be an invoice, a contract, a will, a photograph, a tape recording or film or an email, spreadsheets, etc. for documentary evidence to be admissible in court the witness must prove by other evidence that it is genuine. Documents can be primary evidence or secondary evidence. Primary evidence is the original documents produced in the court whereas secondary evidence is the copies of the documents of the primary evidence. When the handwriting on document needs to be identified then forensic experts match the handwriting on document with the sample handwriting of certain person and give their opinion as to the handwriting of both the documents.

Physical evidence

Physical evidence is also called real evidence or material evidence. Any material object in the matter which gives rise to the litigation, given as evidence in any trial to prove a fact in issue based on object's physical characteristics is called physical evidence.

Experts working or investigating in forensic labs do study on material objects. When these experts give their opinion about any fact relevant to case in court, court may admit or deny the expert's opinion. Whenever a doubt is created or an expert is required with his physical presence, the expert is called for its testimony in the court of law. An expert starts studying a legal court case only after an expert has been appointed by the court if it feels any necessity of expert evidence. An expert witness when gives the expert evidence has to be a written report. The report must further be given according to the rules provided in provisions of the Act. Unless the interest of justice requires an expert to be present in court, the court will not ask expert to attend the trial.

Evidentiary value, consideration, binding force

Opinion of medical experts

Medical evidence is only an evidence of opinion. It is only to settle the matter and not so important. In case of *Nilabati Behra v. State*¹¹ that the opinion of a doctor is reliable if he held the post-mortem examination and of Forensic Science Laboratory. If any other expert doctor gave any contrary opinion who gave cryptic report and based on its conjectures should not be relied upon. In the case of *Madan Gopal v. Naval Dubey*¹² it was held that the medical opinion is just an opinion and is not binding to the court. Opinion on technical aspects and material data given by the medical experts is only considered by court as advice and the court has to form its own opinion.

Conflicting opinion of two doctors In case of *T.P. Divetia v. State*¹³ it was held that if there is any confliction between the opinion of two doctors then the expert opinion by the doctor who actually examined the injury and held the post-mortem must be considered and not of that doctor who gave an opinion only on the basis of X-Ray report, injury report or post-mortem report etc.

Conflicting opinion between medical evidence and direct evidenceIn case of *Prem v. Daula*¹⁴ it was held that if there is confliction between medical evidence and direct evidence given by eye witnesses then direct evidence given by eye witnesses must be preferred if its testimony is undoubted and not the opinion evidence of the medical expert.

Corroboration of dying declaration by medical evidenceIn the case of *State of U.P. v. Ram Sewak*¹⁵ it was held that it is rare that description of incident and injury described in the dying declaration gets full corroboration from the medical evidenced contained in the injury report or the post-mortem report.

Certificate of doctor on plain piece of paper if to be rejectedIn case of *Ammini v. State*¹⁶ it was held that if the certificate of doctor is given on a plain piece of paper and not on prescribed form regarding the injury caused to accused person, it cannot be rejected merely because it is on plain piece of paper and not on prescribed form.

Medical evidence as to age In case of *S.K. Belal v. State*¹⁷ it was held that if medical evidence shows her age between 17 to 18 years but on the other side documentary evidence shows her age about 18 years, a victim girl cannot be proved minor. But in case of *Jagtar Singh v. State*¹⁸ it was held that if birth certificate is not reliable, the opinion of doctor should be relied upon regarding the age of victim.

Evidence of DNA expertIn case of *PantangiBalaramaVenkata Ganesh v. State of A.P.*¹⁹ it was held that “the evidence of DNA Expert is admissible in evidence as it is a perfect science”.

Opinion of ballistic expertIn the case of *S.S. Ajmer Singh v. State of Punjab*²⁰ it was held that if there is no ground not to believe the opinion of ballistic expert, then the opinion of ballistic expert is reliable. Only because there was delay in sending the pistol for obtaining expert opinion as to whether it was in working condition, does not make it unreliable when there is clear evidence of the seizure of the weapon and there was no suggestion that the pistol has been substituted. In case of *Gundegowda v. State*²¹ it was held that ballistic expert report was admissible without calling ballistic expert as witness. In case of *Richhpal Singh v. State of Punjab*²² it was held that the opinion of ballistic expert is very importance in cases where injury is caused by fire arms. In case of failure to produce such opinion report effects the credit worthiness.

Police officer when can be treated as ballistic expertIn case of *Brij Pal v. State*²³ it was held that police personnel must be treated as ballistic expert if he is having certificate of technical competency and armour technical course and also having long experience of inspection, examination, and testing of fire arms and ammunition.

Finger-print expertIn case of *Keshavlal v. State of M.P.*²⁴ it was held that before the seizure of the weapon of offence, if many people have handled it then there will be no effect of non-examination of the finger-print expert in any way.

¹⁴Prem v. Daula, AIR 1997 SC 719: (1997) 9 SCC 754: 1997 SCC (Cri) 754: 1997 Cr LJ 838.

¹⁵ State of U.P. v. Ram Sewak (2003) 2 SCC 161

¹⁶Ammini v. State, AIR 1998 SC 260: 1998 Cr LJ 481

¹⁷ S.K. Belal v. State, 1994 Cr LJ 467 (Ori).

¹⁸Jagtar Singh v. State, AIR 1993 SC 2448: 1993 Cr LJ 2886.

¹⁹PantangiBalaramaVenkata Ganesh v. State of A.P., 2003 Cr LJ 4508 (AP).

²⁰ S.S. Ajmer Singh v. State of Punjab, 1993 SCC (Cri) 1113: (1993) 3 (Supp) SCC 738.

²¹Mirdhe (1996). S.G. Gundegowda v. State Karnataka. Criminal Law Journal, 852

²²Hegde S. (2000). Rchhpal Singh v. State of Punjab, AIR SC 2710, AIR (All India Reporter), SC (Supreme Court).

²³Brij Pal v. State (1996) 2 SCC 676: 1996 SCC (Cri) 392: 1996 Cr LJ 1677.

²⁴Keshavlal v. State of M.P., AIR 2002 SC 1221: (2002) 3 SCC 254: 2002 SCC (Cri) 641.

Handwriting expertIn case of *Alamgir v. State (N.C.T. Delhi)*²⁵ it was held that opinion of handwriting expert do not amount to conviction but admittedly it can be relied upon when supported by other items of internal and external evidence. In the case of *Devi Prasad v. State*²⁶, it was held that evidence given by a person who has insufficient familiarity should be discarded. Indian Evidence Act insists that documents either be proved by primary evidence or by secondary evidence.**Scientific expert** The scientific evidence given in court must be either based on scientific theory or the hypothesis and such evidence is expected to be empirical and properly documented in accordance with scientific method such as is applicable to the particular field of inquiry. It is a fact that scientific evidence is demonstrative evidence unlike oral testimony, which depends on the deposition of a witness. Scientific methods are used to obtain scientific evidence. Evidence should be relevant and at the same time worthy enough to become admissible in the courts. An expert witness is called to testify about the reliability of the scientific evidence sought to be introduced at trial. In the case of *Pritam Singh v. State of Punjab* the footprint in blood near the dead body were compared with the footprint of accused dipped in color ink. 9 and 10 similarities were found by the experts in right and left foot respectively of the accused with that blood footprint. Whereas 3 dissimilarities were also found that were explained due to difference in density of blood and ink. It was held that comparison test stood well and footprints in blood were of accused.

Opinion expressed in text books

In case of *State of Madhya Pradesh v. Sanjay Rai* it was held that opinions expressed in text books by specialist authors may be of some importance for court in arriving the truth but same cannot be treated as final or conclusive.

Admissibility of expert evidence

Expert opinion is admissible only when an expert is examined as a witness in a court. Unless the expert gives an appropriate reason for his opinion and being tested during the cross-examination of opponent party, an expert opinion cannot be admissible. Law has stated various provisions for the examination of experts. According to section 293 of CrPC the report of Government scientific experts provided under this section will be held admissible as evidence in inquiry, trial or other proceedings of the court, if the court can summon or examine the experts. If court feels any need to call upon the expert to examine as to subject matter of his report, the court can summon such expert. Further this section states that when court summons such expert and that expert is not able to attend personally, such expert can send his responsible working officer on his behalf who is well versed with the examination done by such expert.

Opinion when relevant/when not relevant

Facts bearing upon opinion of expert

²⁵*Alamgir v. State (N.C.T. Delhi)* AIR 2003 SC 282: 2003 Cr LJ 456.

²⁶*Beg M. (1967). Devi Prasad and Ors. v. State*, on 10 September, 1964. 1967, *Criminal Law Journal*, 64, 134, AIR (All India Reporter).

Section 46 of Indian Evidence Act, 1872 states that when an expert makes any opinion about the evidence which is relevant then the facts given by expert are relevant which they supports or are inconsistent with the opinion of expert. If we need to know whether A is intoxicated by a certain poison, the fact that A exhibits any symptoms which experts affirm or deny being the symptoms of that poison, is relevant. Opinion as to handwriting, when relevant Section 47 of Indian Evidence Act, 1872 states that “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 or signed by that person, is a relevant fact” .

Opinion as to electronic signature²⁴, where relevant

Section 47A of Indian Evidence Act, 1872 states that: “When the Court has to form an opinion as to the [electronic signature] of any person, the opinion of the Certifying Authority which has issued the [Electronic Signature Certificate] is a relevant fact.”.

Opinion as to existence of right or custom, when relevant

Section 48 of Indian Evidence Act, 1872 states that: “When the Court has to form an opinion as to the existence of any general custom or right, the opinions, as to the existence of such custom or right, of persons who would be likely to know of its existence if it existed, are relevant”.

Opinion as to usages, tenets, etc., when relevant

Section 49 of Indian Evidence Act, 1872 states that: “When the Court has to form an opinion as to— the usages and tenets of any body of men or family, the constitution and government of any religious or charitable foundation, or the meaning of words or terms used in particular districts or by particular classes of people, the opinions of persons having special means of knowledge can be relevant facts”.

Opinion on relationship, when relevant

Section 50 of Indian Evidence Act, 1872 states that: “When the Court has to form an opinion as to the relationship of one person to another, the opinion, expressed by conduct, as to the existence of such relationship, or any person who, as a member of the family or otherwise, has special means of knowledge on the subject, is a relevant fact: given that such opinion shall not be sufficient to prove a marriage in proceedings under the Indian Divorce Act, 1869 (4 of 1869) or in prosecutions under section 494, 495, 497 or 498 of the Indian Penal Code (45 of 1860)”.

Grounds of opinion, when relevant

Section 51 of Indian Evidence Act, 1872 states that: “Whenever the opinion of any living body or living person is relevant, the grounds on which such opinion is based are also relevant. Illustration An expert may give an account of experiments performed by him for the purpose of forming his opinion”.

In civil cases character to prove conduct imputed, irrelevant

Section 52 of Indian Evidence Act, 1872 states that: “In civil cases, the fact that the character of any person concerned is such as to render probable or improbable any conduct imputed to him, is irrelevant, except in so far as such character appears from facts otherwise relevant”.

In criminal cases, previous good character relevant

Section 53 of Indian Evidence Act, 1872 states that: “In criminal proceedings, the fact that the person accused is of a good character, is relevant”.

Evidence of character or previous sexual experience not relevant in certain cases

Section 53-A of Indian Evidence Act, 1872 states that: “In a prosecution for an offence under section 354, section 354-A, section 354-B, section 354-C, section 354-D, section 276-A, section 376-B, section 376-C, section 376-D, section 376-E of Indian Penal Code (45 of 1860) or for attempt to commit any such offence, where the question of consent is in issue, evidence of the character of the of such person or victim’s previous sexual experience with any person shall not be relevant on the issue of such consent or the quality of consent”

Previous bad character not relevant, except in reply

Section 54 of Indian Evidence Act, 1872 states that: “In criminal proceedings the fact that the accused person has a bad character is irrelevant, unless evidence has been given that he has a good character, in such case it becomes relevant”.

Character as affecting damages

Section 55 of Indian Evidence Act, 1872 states that: “In civil cases, the fact that the character of any person is such as to affect the amount of damages which he ought to receive is relevant”.

1.1 Handwriting expert’s opinion (Section 47)

When the court has an opinion that who has written or signed a document the court will consider the opinion of a person who is acquainted with the handwriting. That person will give an opinion that particular handwriting is written or not written by that particular person or not.

The handwriting of a person may be proved in the following ways:

- A person who is an expert in this field
- A person who has actually seen someone writing, or
- A person who has received any document which is written by the person whose handwriting is in question or under the authority of such person and is addressed to that person
- A person who regularly receives letters or papers which are written by that person
- A person who is acquainted with the signatures or writing of that person
- A certifying authority who has issued a digital signature certificate when the court has formed an opinion as to the digital signature of a person. This is mentioned under section 47-A of the act.
- The evidence of the writer himself. This is mentioned in section 60 of the act.
- If another person admits that the documents were written by him. This is mentioned in section 21 of the act.
- A person who has seen the person writing or signing. This is mentioned under section 60 of the act.
- When the court himself compares the document in question with any other document which is proved genuine in the court. This is mentioned in section 73.
- The court may ask the person to write something for the court to compare it with the document in question.

For example, Ms. Priyanka claims in the court that she has not signed any document for sale of her property. To match her signatures with the one on papers, the court calls Mr. Kamal who is the personal assistant of Ms. Priyanka. Mr. Kamal's job is to get all the official documents of the company to be signed by Ms. Priyanka. Mr. Kamal gives a testimony that the papers were signed by Ms. Priyanka only. Here, Mr. Kamal will be termed as an expert under the meaning of s. 47 as he has seen Ms. Priyanka signing the documents and regularly receives such papers.

However, there have been several instances where the courts have been discouraged to decide cases of matching of signatures without evidence and merely on inspection. The court needs to work with the utmost care and caution in determining the authenticity of the documents.

Opinion for Electronic evidence (Section 45A):

When a piece of information is transmitted or stored in a computer system and the court needs assistance or opinion for the same in any case; they refer an examiner of electronic evidence. This examiner of electronic evidence is known as the expert in such cases.

For this section, electronic evidence includes any information transmitted or stored in any computer resource or any other electronic or digital form for which the opinion of electronic evidence examiner is required as per section 79A of the Information Technology Act, 2000.

Opinion for foreign law (Section 38 r/w Section 45)

When there is a law of prevailing in any foreign country which needs to be considered for giving judgement in any case, the court needs an expert who is well versed with that law.

Otherwise, the court can take opinion from a law-book which contains the answer regarding any foreign law. These books must be printed or published under the authority of the government of that country. Other reports of the ruling of the courts can also be taken as relevant which are given in such books of foreign law.

Foreign law in India is always considered as a question of fact. There have been cases where the court has interpreted personal laws as Indian laws and thus are the laws of the land. Therefore, the court does not require a person to interpret the law as the courts can do that task on their own.

Opinion for fingerprint

Generally, finger impression expert's opinion is given more value because :

- The fingerprints of any person remain the same from their birth till death, and
- No two individuals' are ever found to have the same finger impressions

Footprint studies are gaining importance nowadays but the courts have been reluctant to accept that as a piece of evidence. A person, who is a fingerprint expert, is called to match two or more fingerprints, than the opinion of such an expert is relevant and admissible in the court.

Opinion for Science or Art

The words 'Science and Art' are to be broadly constructed. The term 'science' is not limited to higher sciences and the term 'art' is not limited to fine arts, but having its original senses of handicraft, trade, profession and skill in work.

To construe that if any expertise comes under the head of 'art' or 'science'; the following tests can be applied:

- Is the subject matter of the injury such that inexperienced people are not capable of forming a correct judgement without the assistance of experts?
- Is the character of a science or art as such that it requires a course or a study to obtain a competent knowledge or skill.

Science and Art signify the activities which include the fields which require special knowledge or expertise form an opinion. Before designating that a person is an expert, it needs to be checked that the field or the matter on which we are seeking the opinion should not be something which can be easily understood by layman or court without any special knowledge or skill.

The scientific question involved is assumed to be not within the court's knowledge. Thus cases, where the science involved, is highly specialized and perhaps even esoteric, the central role of an expert cannot be disputed .

Every science has its own technical terms, which are so much Greek or Hebrew to the average juryman. What would the Ordinary man make of this answer to a question whether a certain dose of a prescription containing chloral would have been dangerous!

There can be various categories which can be treated under art and science. Some of them are discussed below for better understanding.

Opinion of Medical Expert

In many cases, the opinion of medical experts is required. Especially in criminal cases, the medical examination of accused and victim is necessary. When in a case, the court requires some opinion which involves medical technicalities, they ask medical officers.

Opinions of a medical officer can be used to prove:

1. The Physical condition of the person,
2. Age of a person
3. Cause of death of a person
4. Nature and effect of the disease or injuries on body or mind
5. Manner or instrument by which such injuries were caused
6. Time at which the injury or wounds have been caused.
7. Whether the injury or wounds are fatal in nature
8. Cause, symptoms and peculiarities of the disease and whether it is likely to cause death
9. Probable future consequences of an injury etc.

Say in a rape case, the medical report of the victim and accused are of great importance. If the medical officer says that he thinks that act was not consensual referring to the injuries on the body of the victim and the nail scratches on the body of the accused, this opinion carries a lot of importance.

But the problem with these experts is that they are always called by one party only who has evidenced in their favour. This is the reason that the court is reluctant to rely completely upon the views and opinions of the expert though they consider the same while imparting their judgement.

In other cases, if the court finds that the expert's opinion is in contradiction with the opinion of an eye-witness then for obvious reasons, the normal witness's opinion is given preference over the expert's opinion. This is because the expert's statement is just opinionative whereas the other witness's statement is based upon the facts of the case.

Opinion of Ballistic Expert

Ballistic experts, also known as firearms expert are people who are experts in the study of projectiles and firearms. Their help is taken in cases where guns are involved.

A ballistics expert may trace a bullet or cartridge to a particular weapon from which it was discharged. Forensic ballistics may also furnish opinion about the distance from which a shot was fired and the time when the weapon was last used.

It must be noted that the opinion of the ballistics expert can be taken into consideration only when he himself has given the report. In the case where the expert gives opinion only by looking at the picture of the wound, the court denied relying upon such opinion.

Evidence of Tracking Dog

Trained dogs are used for the detection of crime. The trainer of tracking dogs can give evidence about the behaviour of the dog. The evidence of the tracker dog is also relevant u/s 45.

Moreover, Sec.293 Cr.P.C. provides a list of some Govt. Scientific Experts as following:-

- Any Chemical Examiner / Asstt. Chemical examiner to the Govt.
- The Chief Controller of explosives
- The Director of the Fingerprint Bureau
- The Director of Haffkein Institute, Bombay
- The Director, Dy. Director or Asstt. Director of the Central and State Forensic Science Laboratory.
- The Serologist to the Govt.
- Any other Govt. Scientific Experts specified by notification of the Central Govt.

Evidentiary Value of an Expert Opinion

The data given by the expert are relevant and admissible. If any oral evidence contradicts the data/report; it will not make the data evidence obsolete. But, as per section 46, in case any fact is in contradiction to the opinion of the expert, that fact becomes relevant. If the opinion of the expert is relevant, the contradictory fact becomes relevant even though it was not relevant as such. The value of expert opinion depends upon the facts on which he is based and the competency of such expert in forming a reliable opinion.

However, the personal appearance of the expert in the court can be excused unless the court expressly asks him to appear in person. In such a case, where the expert is excused, he can send any responsible officer who is well versed with the facts of the case and the report and can address the court with the same.

If a judge relies upon the opinion of the expert only and not on the facts and the testimony of ordinary witnesses to give judgement then is the weakness of the case. This is because even if a person is an expert in his field, he cannot be termed as a direct witness and cannot give a statement on the facts of the case. He is just giving an opinion as per the evidences given to him and cannot draw a conclusion regarding the guilt of the accused in all the cases.

The evidence given by the expert is just an opinion and is not a fact-based testimony and thus are given slight value. This is the reason that eye-witnesses or other factual witnesses are given a priority over the expert's opinion. This is because opinion evidence cannot supersede substantive evidence. No expert can claim that he could be absolutely sure that his opinion was correct, expert depends to a great extent upon the materials put before him and the nature of the question put to him.

However, the evidentiary value of an expert's opinion depends upon the facts and circumstances. For example, if there is a dispute as to who is the biological parent of a child, the DNA report of the Medical expert is of great importance. If the expert says that the DNA of the child or parents matches, than it is a relevant fact in deciding the case.

But in case if a handwriting expert says that the signatures matches or not matches with the person; this fact does not hold much value because there can be a possibility that the person has practiced a lot to copy the signature. But on the other hand, DNA cannot be copied or changed.

Privy council once observed that 'there cannot be any more unsatisfactory evidence than that of an expert.' In the case of Emperor v. Kudrat , the court held that when the expert is giving an opinion upon the age by observing only the height, weight and tooth; it cannot be relied upon.

The court must be satisfied that the accused is guilty. The court cannot hold him guilty mere because an expert has said that in his opinion, the person is guilty. The court needs to look into the evidence along with the opinion of the expert before giving any judgement or order.

Judicial Scrutiny

Expert's opinion goes through high-end judicial scrutiny and is less reliable since they are based upon opinion and not facts. They are just the perspective of the expert and he needs to establish the reliability of his testimony. The statement of an ordinary witness is considered more reliable as compared to that of an expert. This is because the testimony of a layman is based upon facts. If in any case, his statement contradicts with the opinion of the expert; his statement will be given an upper hand than the expert.

Conclusion

Unlike an ordinary witness, expert witnesses have a separate standing as a witness in a court. It is interesting to note that an expert's report cannot be questioned in the court. The report is questioned when the ability and knowledge of the expert to make that report is in question. The experts are judged with a different eye by the court since they are just giving an opinion and are not aware of the facts of the case. But still, an expert's opinion matters as the court has no knowledge of that particular field of expertise and they will not be able to impart justice without seeing the other side of the coin.

As is shown in this paper, the expert opinion is of a highly objective nature. Thus, it should not be rendered as merely corroborative in nature. The discrepancies of the Court in the value ascribed to expert opinion forms for a bad law. The judge is the only party in a trial who is truly in pursuit of justice. In consonance with the same, the judge must acknowledge the conclusive value of evidence that helps in furthering the cause of justice. Expert evidence is that evidence. Thus, expert evidence must be given conclusive value when it is established that it is reliable and valid evidence.