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Review Article

Admissibility of Forensic Evidence in Indian Courts

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ABSTRACT

Scientific evidences are crucial to the fact finder in order to arrive at the logical consequence in deciding large number of issues brought before him/ her. In the present era, they have almost become indispensable to them. Whether scientific evidence is worth believing or not is a key issue which can be encountered by a judge/ jury when ever scientific evidence is put before him? The issue gains much more importance whenever a new/ upcoming scientific principle is to be applied as evidence in the court of law. The Indian Evidence Act, Section 45 describes an expert. However the law is silent on the objective criterions that should be adopted while admitting or rejecting an expert. There is no other law of the land to regulate the admissibility of a forensic evidence and more so in relation to a new/ upcoming scientific principle. However recently in one the apex court (Supreme Court of India) judgment this issues have been deliberated upon following the principles enunciated in the United States of America. Thus, now in a sense they have the legal sanctions to be applied to the Indian scenario.

Keywords: Forensic evidence, Scientific evidence, Court, Admissibility

INTRODUCTION

The last century witnessed the growth of natural science by leaps and bounds. The mystic theories were gradually replaced by the cold logics of scientific principles. The change was also perceived in the administration of justice and the era of forensic evidence arrived slowly but significantly. The two facets a case emerged in the courts, one that is stated and the other that is scientifically proved. As science is indispensable in the society, and growth is synonymous with it, our constitution recognized its importance and is amply depicted in the Article 51 A (h) and (j) that declares, that it shall be the duty of every citizen of India "to develop the scientific temper, humanism and the spirit of inquiry and reform" and "to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement".

This constitutional article not only gives a clear mandate rather makes every citizen duty bound that scientific principles should be allowed to foster and an excellence should be achieved in order to have the fruits of the science to all the citizens of the country.

As per Webster's Dictionary, 1913, evidence is described as, " that which makes evident or manifest; that which furnishes, or tends to furnish, proof; any mode of proof; the ground of belief or judgement; as, the evidence of our senses; evidence of the the truth or falsehood of a statement". Strictly in legal context, evidence can be defined as various things presented in court for the purpose of proving or disproving a question under inquiry. It includes testimony, documents, photographs, maps, video tapes etc. In a trial the evidence consists of:

1. The sworn testimony of witnesses, on both direct and cross-examination, regardless of who called the witness.
2. The exhibits which have been received into evidence.
3 Any facts to which the lawyers have agreed or stipulated[1].

Forensic evidence is referred to anything collected at a crime scene that tells the story of how the crime was committed. It can also corroborate the stories that are told by eyewitnesses[2]. However it is not always mandatory that the forensic evidence is confined only to the scene of crime. As, it may be related to any scientific evidence needed to solve a legal problem.

The Indian Evidence Act, originally passed by the British parliament in 1872, contains a set of rules and allied issues governing admissibility of any evidence in the Indian courts of law. The enactment and adoption of the Indian Evidence Act was a path-breaking judicial measure introduced in India, which changed the entire system of concepts pertaining to admissibility of evidences in the Indian courts of law. Up to that point of time, the rules of evidences were based on the traditional legal systems of different social groups and communities of India and were different for different persons depending on his or her caste, religious faith and social position. The Indian Evidence Act removed this anomaly and differentiation, and introduced a standard set of law applicable to all Indians. The Indian Evidence act of 1872 is mainly based upon the firm work by Sir James Fitzjames Stephen, who could be called the founding father of this comprehensive piece of legislation. The Indian Evidence Act, identified as Act no. 1 of 1872, and called the Indian Evidence Act, 1872, has eleven chapters and 167 sections, and came into force 1st September 1872. At that time, India was a part of the British Empire. Over a period of more than 125 years since its enactment, the Indian Evidence Act has basically retained its original form except certain amendments from time to time. When India gained independence on 15th August 1947, the Act continued to be in force throughout the Republic of India, except the state of Jammu and Kashmir. It also applies to all judicial proceedings in the court, including the court martial as well. However, it does not apply on affidavits and arbitration[3].

The specific law that governs the scientific evidence in our country is Section 45 of the Indian Evidence Act. According to this section, "When the Court has to form and opinion upon a point of foreign law or of science or art, or as to identity of handwriting or finger impressions, the opinions upon that point of persons specially skilled in such foreign law, science or art, or in questions as to identity of handwriting or finger impressions are relevant facts. Such persons are called experts.

Further as per section 46 of Indian evidence act 1872 it is stated that facts, not otherwise relevant, are relevant if they support or are inconsistent with the opinions of experts, when such opinions are relevant.

Thus the ingredients of section 45 and section 46 are highlights that:

1) The court when necessary will place its faith on skills of persons who have technical knowledge of the facts concerned.
2) The court will rely the bona fide statement of proof given by the expert concluded on the basis of scientific techniques.
3) The evidence considered irrelevant would be given relevance in eyes of law if they are consistent with the opinion of experts.

Thus we see that expert evidence helps the courts to draw logical conclusions from the facts presented by experts that are based on their opinions derived by their specialized skills acquired by study and experience. Hence, experts are routinely involved in the administration of justice particularly in criminal courts. But the issue is-what are the objective yardsticks to measure the opinion of an expert? The law is silent on this and did not elaborate. The problem becomes more acute when a new scientific principle evolves and is in the face of infancy and has not gained popularity in masses and thus its admissibility is questionable. Similar to any other evidence an admissible evidence is, "*Admissible evidence,* in a court of law, is any testimonial, documentary, or tangible evidence that may be introduced

to a fact finder usually a judge or jury in order to establish or to bolster a point put forth by a party to the proceeding. In order for evidence to be admissible, it must be relevant, without being prejudicial, and it must have some indicia of reliability"[4]. Thus for any evidence to be admissible in the court it should satisfy two basic conditions:

a) Relevancy; and

b) Reliability.

For an evidence to be relevant, it must tend to prove or disprove some fact that is at issue in the proceeding. However, if the utility of this evidence is outweighed by its tendency to cause the fact finder to disapprove of the party it is introduced against for some unrelated reason, it will not be admissible. The relevance of evidence is not a difficult thing to decide. However the same is not true as far as the reliability is concerned. Based on the above two criterion the acceptance of scientific evidences can be grouped into:

1) The principles that are so greatly accepted that the they need not be established each time (e.g. Dactylography, bite marks);

2) The junk principles that are universally discredited which can be out rightly rejected (e.g.. Astrology); and

3) Some novel scientific methods which can neither be accepted nor be rejected out rightly (e.g.. Polygraphy, DNA typing {presently, it can be shifted to group 1})

Rules Regarding Admissibility of Scientific Evidence: The major issues in relation to admissibility of scientific evidence are:

1) Whether the subject matter of the expert's opinion is appropriate to the case;

2) Whether the expert is sufficiently qualified to render the opinion;

3) The type of information on which the expert bases his opinion;

4) The role of general consensus in the scientific community in evaluating the admissibility of expert testimony; and

5) Limitations other than the above pertaining to the type of opinion an expert can express.

As far as our country is concerned there are no rules to govern the admissibility of the scientific evidence. The only regulations in this aspect are Section 45 and 46 of Indian Evidence Act. However this issue has been deliberated upon in some other countries and specifically in US. Where, the first regulation was known as- *The Frye Standard or The Frye Test*. This was the first important ruling in America regarding the admissibility of scientific evidence. It dealt with a precursor to the polygraph which detected deception by measuring changes in systolic blood pressure. In that case the defendant was subjected to this test before the trial and his counsel had requested the court that the scientist who had conducted the same should be allowed to give expert testimony about the results. Both the trial court and the appellate court rejected the request for admitting such testimony.

The court stated: 'Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential forces 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 to which it belongs'[5]. We think the systolic blood pressure deception test has not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony deduced from the discovery, development, and experiments thus far made.

Though the test paved the way to legal admissibility to scientific evidence it was criticized on the grounds, that:

1) There will have to be a considerable time lag for the scientific method to be accepted by the community; and

2) It was considered to be a roadblock to admissibility of even efficacious evidence simply because the technique were recently developed and has not gained general acceptance.

Further, it was not clear that what is meant by general acceptance? Whether it means acceptance in general public or amongst the scientific community? As, the acceptance is first perceived in the scientific community, that percolates to the general public latter on. Moreover, what is the yardstick to measure the general acceptance? Whether it amounts to simple majority or even if acceptance amongst significant number of people in the scientific community or general public can amount to general acceptance? To address some of these issues *The Federal Rules Of Evidence* was then enacted in 1975, of which *Rule 702* stated, 'If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education may testify thereto in the form of an opinion or otherwise'. The Federal Rules instead of solving the matter led to more confusion because it did not include the Frye standard and there was no objective criterion for the reliability of the evidence. However, these rules remain in force up-to 1993 when the objectivity was given to the rules in relation to the admissibility of scientific forensic evidence. The new rules were called as *The Daubert Standard*. The United States Supreme Court first addressed the reliability requirement for experts in the landmark case *Daubert v. Merrell Dow Pharmaceuticals, Inc.* 509 U.S. 579 (1993)[6]. In this case the petitioners had instituted proceedings against a pharmaceutical company which had marketed `Bendectin', a prescription drug. They had alleged that the ingestion of this drug by expecting mothers had caused birth defects in the children born to them. To contest these allegations, the pharmaceutical company had submitted an affidavit authored by an epidemiologist. The petitioners had also submitted expert opinion testimony in support of their contentions.

The District Court had ruled in favour of the company by ruling that their scientific evidence met the standard of 'general acceptance in the particular field' whereas the expert opinion testimony produced on behalf of the petitioners did not meet the said standard. The Court of Appeals for the Ninth Circuit upheld the judgment and the case reached the U.S. Supreme Court which vacated the appellate court's judgment and remanded the case back to the trial court. It was unanimously held that the 'general acceptance' standard articulated in Frye had since been displaced by the enactment of the Federal Rules of Evidence in 1975, wherein Rule 702 governed the admissibility of expert opinion testimony that was based on scientific findings.

The court concluded that the Federal Rules Of Evidence superseded the Frye Rule and that the rigid general acceptance rule should not come on the way of a reasonable minority scientific opinion in the form of new and emerging research based on reliable studies. These rules also first time defines as what is meant by the general acceptance i.e. it should be in the scientific community and it should not necessarily be amongst the majority. It also laid down factors for the basis of scientific evidence which are also known as The Daubert Guidelines. The Court laid out four non-exclusive factors that trial courts may consider when evaluating scientific expert reliability:

(1) Whether scientific evidence has been tested and the methodology with which it has been tested?;

(2) Whether the evidence has been subjected to peer review or publication?;

(3) Whether a potential rate of error is known?; and

(4) Whether the evidence is generally accepted in the scientific community?

The utility of Daubert Guidelines in Indian conditions was discussed by some of the Indian authors[7]. They argued that although there is usually no problem in admissibility of scientific evidence in Indian Courts, in case of doubt, the Daubert Guidelines can be followed. But quality control and standards for scientific evidence have to be set, to avoid discrepancies in the Court of Law.

SOME EXAMPLES OF *DAUBERT* APPLIED TO SPECIFIC TECHNIQUES:

(Note this is not a complete list, and is not accurate for ALL jurisdictions)

BALLISTICS generally FAILS the *Daubert* standard despite widespread acceptance. BATTERED WOMAN SYNDROME has satisfied the *Daubert* standard in some jurisdictions, but fails in most.

CHILD ABUSE ACCOMMODATION SYNDROME has FAILED the test, for the most part. COMPUTER SIMULATION has failed because experts can't explain the algorithms. DNA evidence is admissible under either the Frye or Daubert standard, but the reliability issue goes beyond the matter of testimony to the proper performance of protocols and probability estimates.

EYEWITNESS IDENTIFICATION generally FAILS the *Daubert test*, for the most part, as most social science, like social psychology, does.

FORENSIC ANTHROPOLOGY has not yet met the *Daubert test*, but the study of certain features from bones remains reliable.

HAIR ANALYSIS. *Daubert* has been successfully applied to Spectrophotometer and Gas Chromatographic tests for detecting the past use of drugs.

HYPNOSIS has known therapeutic value, but not as a method of producing accurate recollection of past events, as it would be used in court. Hypnosis, therefore, does not meet the Daubert test.

INTOXILYZER TESTS have been ruled valid and are considered beyond scientific dispute by many judges.

POLYGRAPH evidence (which was usually acceptable under Frye with a few exceptions) is beginning to be found reliable in *Daubert* hearings, but still does not enjoy nationwide acceptance, and is, in fact, outlawed by per se laws in various jurisdictions.

PSYCHIATRIC evidence has had mixed results under Daubert. Techniques such as use of penile plethysmography to measure sexual arousal have had problems getting admitted, but no problems in other states. Also having difficulties is psychological or sociopsychological profiling which is often attacked for its lack of logical foundation and/or weak methodology. Checklist techniques, such as those used to determine if someone is a pedophile or a psychopath (e.g., an Axis disorder on the DSM IV) are experiencing difficulties. However, testimony regarding mental disorders that go to the matter of *mens rea* generally satisfies the *Daubert test.* as does much diminished capacity testimony and the more proven variety of syndromes.

QUESTIONED DOCUMENTS (or Expert Handwriting Analysis) has been ruled by many judges as not requiring the *Daubert test* because scientific principles have nothing to do with the day to day tasks are performed by practicing QDEs. However, some newer types of analysis are experiencing difficulties.

SOCIAL SCIENCE evidence, such as the use of regression analysis to show evidence of racial bias or estimates of damage, often requires the addition of proof from the field of epidemiology and some demonstration of mastery at econometrics, but "naked" statistical evidence has often been admitted anyway by some judges.

TRACE EVIDENCE COMPARISON has not yet been decided due to controversy over the qualifications required for a forensic scientist or lab technician. VOICE COMPARISON techniques have FAILED the *Daubert test*, for the most part [8].

It appears that in order to accommodate these Daubert Guidelines, *The Federal Rules Of Evidence were then amended in 2000. the Rule 702* now reads : ' If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education may testify thereto in the form of an opinion or otherwise if:

1) the testimony is based upon sufficient facts or data;
2) the test is the product of reliable principles and methods; and
3) the witness has applied the principles and methods reliably to the facts of the case.

Most of the countries world wide appears not to be satisfied with the present common law approach to the admissibility of expert evidence in criminal proceedings, which is argued as unsatisfactory and should be replaced

with a new statutory test [9]. Significantly, all the above narrated rules have been deliberated upon in a recent judgment on 5th May, 2010 by the Supreme Court of India in Selvi & Ors. Vs. State Of Karnataka & Anr, while deciding the issue of administration of Polygraphy, Narcoanalysis and Brain Electrical Potential Profile (BEAP Test) on the arrested accused under Section 53, 53A and 54 of Cr.P.C.[10]. Thus this judgment has paved the way that these regulations can also apply to the Indian scenario while deciding the admissibility of scientific forensic evidence by Indian courts.

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