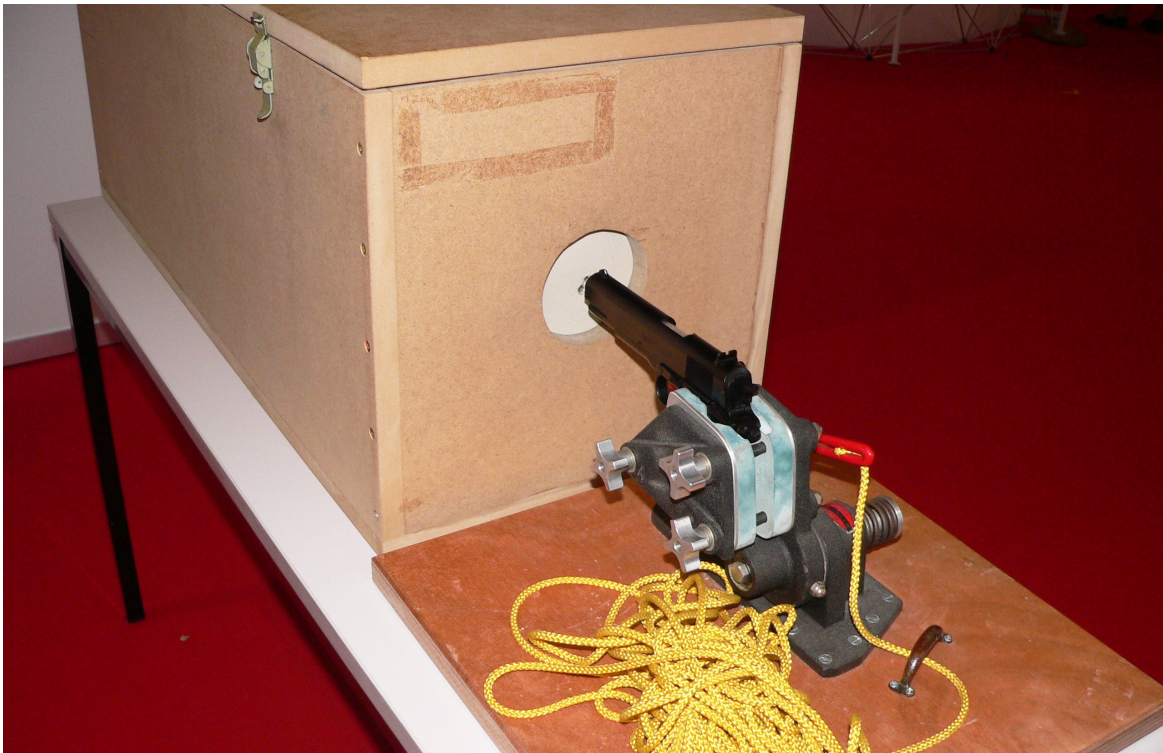


GOLDEN RESEARCH THOUGHTS

THE EVIDENTIARY VALUE OF BALLISTIC EXPERTS



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The science of 'ballistics' has been developed to facilitate the examination of firearms, ammunition and other related matter. But the terms 'ballistics' is generally used to refer to the study of the trajectory of bullets or missiles rather than of the missiles (bullets), and the miscible launchers (Guns) themselves. More appropriately the phrase 'Forensic Ballistics' which was first coined by Colonel Goddard, a pioneer in this study, means the systematic study of the firearms and ammunition used in the commission of crime for the purpose of investigation and identification. It is therefore, necessary for all Police Officers entrusted with the investigation of firearms cases to understand the characteristics of firearms and ammunition, and their evidentiary value in crimes.

The position of the cartridges, cartridge cases and bullets is equally important. From their position it is possible to deduce the position of firing, the direction of shot and, in certain cases also the path of the bullet. The presence of a cartridge case at the scene may indicate the type of firearm used in the offence. The position of wads and over-shot

wads, for shot gun cartridges and muzzle loading weapons also give information relating to the bore of the gun, the direction of shooting, the make and type of cartridge, the number of shots and nature of power used in it.

Ballistics is the study of the functioning of firearms – firing, the flight of the bullet, and the effects of different types of ammunition.

According to the ballistic expert's evidence, unless there was cogent material and reliable evidence to show that the deceased had kept his right arm in front of his chest, the deceased could not have sustained less than two injuries.

State of **Himachal Pradesh V. Ram Singh** - The ballistic expert could not connect the two pieces of the bullet with the rifle but nonetheless he opined that a shot was fired from this rifle and the weapon was a fit one and could be utilized for firing. In these circumstances the inability of the expert to connect the two fragments of the bullet with the rifle could not be a circumstance necessarily leading to the inference that the said bullet was not shot from the rifle. Any expert may be ballistic or otherwise, can only give opinion evidence. In a case where eyewitnesses are reliable and testify definitely to the weapon of attack any opinion of an expert even if it indicated a circumstance, which does not exactly, fit in prosecution story would be of no avail and can easily be ignored. All the same in the instant case, the opinion of the expert cannot be stated to negate the prosecution version in any manner.

State of **Bihar V. Hanuman Koeri** - The gun and the cartridge had been set to the arms expert, who has been examined as P.W 6 in the case. His evidence was required to determine whether the cartridge, which had been seized, was used in the gun produced by the appellant or not is that on 25-7-1966 he had received a double barrel gun along with one fired cartridge case. He found the left barrel of the gun coated with a quantity of fouling, indicating it was fired previously and the gun was in perfect working condition. With the said gun he fired two cartridges and compared the three-fired cartridges under comparison microscope and found similar striker and breech face markings on the percussion caps of the fired cartridges. He proved his report, which was marked Exhibit 5, and explained that next to balls, L.G. shots were the biggest, having 6 shots in each 21/2 cartridge.

Sometimes, it may happen that there may be differences in the evidence of eye witness, post-mortem report and ballistic report, still it may be possible for the court to arrive at the judgment of conviction as it happened in *Leela Ram V. State of Harayana*, two injuries are undoubtedly gun-shot injuries. Dr. Mathur, who performed the post-mortem, stated that these injuries could be caused if fired at from a distance of over 4 feet. There were corresponding holes in the shirt worn by the victim. This medical officer did not say that the aforesaid two injuries were possible by a single shot. However, Shri. Badul Rai, the ballistic expert opined that the said two injuries could have been caused by a single shot fired from a country-made pistol. The High Court took no notice of Dr. Mathur's opinion in this behalf. The evidence of the three eyewitnesses as to the distance from which the shots were fired is a mere estimate. Where the expert evidence is obscure and oscillating, it is not proper to discredit the testimony of the eyewitnesses on such uncertain evidence. In such a situation unless the evidence of the eyewitnesses is shaken by some glaring infirmity it would not be proper to doubt the correctness of their statements.

In ***Kartik Harijan Vs. State of Orissa*** case , where the opinion is given by the Expert of Ballistics who after conducting all the tests deposes in the Court of law, there is no reason to distrust his opinion. It can be accepted. That does not mean in spite having direct evidence, one should call for the opinion of the expert. In every case where a firearm is alleged to have been used by an accused person, in addition to the direct evidence, prosecution must lead the evidence of a ballistic expert, however good the direct evidence may and though, on the record, there may be no reason to doubt the said direct evidence.

In ***State of Gujarat V. Adam Fatch Mohmed*** , the Ballistics Expert failed to make himself intelligible to the court. His opinion was discussed thus:

The expert gave the opinion that the empty cartridges were fired from the rifle because of arch-like projection on the base of the cartridge produced by the defect in the rifle. The expert took photographs of two out of the four empty cartridges. He also took photographs of the test cartridges. He compared the photographs of the empty cartridges and came to the conclusion that marks on the photographs were similar. He, however, did not take photographs of the misfired cartridge. It was stated in his evidence that the marks on the test bullet were indistinct and therefore it was not possible to compare satisfactorily the marks on the bullets, which had been sent by the police to him.

In ***State of Himachal Pradesh V. Mast Ram*** , it has been stated that the report of the ballistic expert has evidentiary value. The report of the ballistic expert submitted under signature of Jr. Scientific Officer (Ballistic) of Central Forensic Laboratory can be read in evidence.

There is yet another infirmity in this case. It was found that whereas an empty cartridge has been recovered by , ASI Raghubir Singh from the spot and a pistol along with some cartridges were seized from the possession of the appellant at the time of his arrest, yet the prosecution, for reasons best known to it, did not send the recovered empty and seized pistol to the Ballistic Expert for examination and expert opinion. Comparison could have provided link between the crime and the accused. This again is an omission on the part of the prosecution for which no explanations has been furnished either in the trial court or before us. It hardly needs to be emphasized that in cases where injuries are caused by firearms, the opinion of the Ballistic Expert is of a considerable importance where both the firearm and the crime cartridge are recovered during the investigation to connect an accused with the crime. Failure to produce the expert opinion before the trial court in such cases affects the creditworthiness of the prosecution case to a great extent."

This observation is made by the Supreme Court in Sukhwant Singh V State of Punjab . The guns, the weapon of offence was not sent to the ballistic expert for examination. It is argued that the creditworthiness of the case is totally demolished entitling the respondent the benefit of acquittal.

In ***State of Punjab V. Jugraj Singh*** case , The Investigation Officer has categorically stated that guns seized were not in a working condition and he, in his discretion, found that no purpose would be served for sending the same to the Ballistic Expert for his opinion. No further question was put to the Investigating Officer in cross-examination to find out whether despite the guns being defective the fire print was in order or not. In the presence

of convincing evidence of two eyewitnesses and other attending circumstance we do not find that the non-examination of the expert in this case has, in any way, affected the creditworthiness of the version put forth by the eyewitnesses.

In **Ram Narain V. State Of Punjab**, if we discard part of the evidence of the eye-witnesses which has come to light for the first time in the sessions court, whereas it was never the prosecution case the Ram Narain Singh or any other accused fired a second shot at the deceased at any time. The medical evidence, therefore, clearly falsifies the prosecution case regarding the manner in which the deceased was hit.

Even the ballistic expert on a question by the court deposed as follows :

“In case if it is a straight fire, and if the right arm is kept just in front of the chest, then it is possible that these injuries could be caused by one single fire.”

The Supreme Court has observed in **Phool Kumar V. Delhi Administration** that it is for the accused to file an application for summoning and examining the expert, if he wants to challenge the report and the Court can summon the expert if the accused submits an application. If that is not done, the grievance of the accused that the report of the expert is being used without his examination in the Court is of no avail.

Andul Samad V. State of Orissa - The ballistic expert deposed that if there were burnt edges of the wound, the distance between the muzzle and the victim would only be a few inches and not more than nine inches. This opinion is in substantial accord with what is found in some of the textbooks on medical jurisprudence. For instance, it is stated in Taylor's Principles and Practice of Medical Jurisprudence, Vol. I, 10th Ed., under the heading “Burning of the Wound.”

It is impossible to state rules as to the precise distance from which it is impossible to produce marks of burning, for this depends on the quantity and nature of the power, the method of charging, and the nature of the power, to get marks of burning beyond a yard or a yard and a half with shotgun, or at more than half a yard with a revolver.

According to the medical evidence, therefore the shot was fired from very close range about 9 inches to a yard or a yard and a half but according to what was shown to the draftsman of the plan by the eye-witnesses the rifle was fired from a range of about 25 feet. This difficulty cannot be surmounted, as was sought to be done by the High Court, as the eye-witnesses were not giving an estimate of the distance but showed to the draftsman the particular spots where the appellant and the deceased stood at the time of firing. This in the face of the medical evidence, the testimony of the eyewitnesses cannot be safely accepted.

Bhag Singh V. State of Punjab - Neither the genuineness of the recoveries of the empties from the roof of the house of Bhag Singh nor the recovery of gun Ex. P. 12 from the person of Bhag Singh at the time he was apprehended has been challenged on behalf of the defense nor the correctness of the opinion given by the ballistic expert has been challenged on its behalf. It has, however, been urged by Shri Dara Singh, counsel for the appellants that according to the statement given by Shri. J.K.Sinha, Assistant Director, Forensic Science

Laboratory, Chandigarh P.W.20, who examined and tested the three empty cartridges, Ex. P 13/1.3 recovered from the roof of the house of Bhag Singh appellant, they were fired from gun, Ex. P.12 used by Bhag Singh appellant and that no empty cartridge has been recovered used in the gun, with which Mehar Singh appellant was armed and with which, according to the evidence of the eye-witnesses, he fired one shot at Basant Singh deceased. The question of recover of empty cartridge dropped from the gun of Mehar Singh appellant will arise only, if there is evidence to from the gun of Mehar Singh appellant will arise only, if there is evident to show that after Mehar Singh fired his shot at Basant Singh, deceased, he emptied his gun. It is nowhere stated by any of the eyewitnesses, and no such question was asked from them in course of their cross- examination, that after Mehar Singh had fired his shot he emptied the gun.

Balak Ram V. State of Punjab - In regard to Balak Ram, there is a concurred finding that the shot fired by him caused the death of Radhey and the court see no reason for taking different view. The evidence in regard to the part played by him is natural and consistent and is corroborated by the opinion of ballistic expert. The evidence of the ballistic expert shows that the bullet which was extracted from Radhey's body was fired from the pistol belonging to Balak Ram. The defense counsel made a severe attack on the evidence of expert and in order to show infirmities in that evidence he read out various passages from the relevant books, such as -

- The Identification of Firearms & Forensic Ballistic – by Major Gerald Bernard.
- J. S. Hatcher's Text Book of Firearms Investigation, Identification & Evidence.

But the evidence of the expert has been closely considered by the High Court and their findings on this aspect as open to no exception.

In **Mahmood & Anr. V. State of U.P.** , it was mentioned that the Medical Officer is not ballistic expert.

He was not expected to answer as to whether injury in question could have been caused by bullet alone. His opinion to that extent has no consequence.

The importance of ballistic expert is always recognised in the case as an expert evidence. The technicalities of ballistic expert's knowledge are not understandable of anyone else, and therefore in cases of gun-injury cases, the ballistic expert's evidence is inevitable.