

Role of Forensic Science in Age Determination Expanding Horizon of Criminal Jurisprudence

Shikha Patel

Gujarat National Law University

Abstract- *With advancement in science and technology the concept of crime as well as the methods adopted by criminals in its commission has undergone drastic change. On one hand the intelligent criminal has been quick to exploit science for his criminal acts; on the other hand the legal system as well as the police authority is no longer able to rely on the former methods of interrogation. The traditional methods no longer sustain in the society.*

Age has obviously an important bearing on identification. The determination of age may be required for the identification of an individual, living or dead. In criminal cases, it is necessary in connection with offence of rape, abduction and infanticide, also to determine whether a child has reached the age at which the law holds it responsible for its act, and if so, what manner of punishment or restraint should be imposed in it.

The most important function of scientific evidence is to convert suspicion into a reasonable certainty of either guilt or innocence. The evidentiary value of expert report with regard to determination of age is admissible but documentary evidence stands at better position than medical evidence. Medical evidence fails to disclose the exact age therefore conviction solely on the basis of such evidence is not reliable.

Keywords- Scientific aptitude, Age determination, Medical Evidence, Juvenile delinquency.

I. INTRODUCTION

“If you were a detective engaged in tracing a murder, would you expect to find that the murderer had left his photograph behind at the place of the crime, with his address attached?

Or would you not necessarily have to be satisfied with comparatively slight and obscure traces of the person you were in search of?”

-----Sigmund Freud

“CRIME”- in some form or the other has existed since the beginning of human existence. With advancement in science and technology the concepts of crime as well as the

methods adopted by criminals in its commission have undergone drastic change. On one hand the intelligent criminal has been quick to exploit science for his criminal acts, on the other hand the legal system as well as the police authorities are no longer able to rely on the former methods of interrogation. The traditional methods no longer sustain in the society.

“Emile Durkheim” – the most prominent French sociologist stated the interrelation of law and society on the basis of solidarity. According to him, as and when the complexity in the society arises, the controlling mechanism too keeps on changing its degree of control and its manner. Thus, Law becomes more and more stringent for the maintenance of justice according to the disparity in the individuals committing crimes.

Thus, criminology has also developed forensic science as a means to deliver justice through proper investigation by undergoing technical and scientific analyses, of the evidentiary materials. Thus, since its inception, forensic has now developed a lot of branches of study in itself.

“Forensic science”- is derived from the Latin word forensic which means belonging to the courts of justice or to public discussions and debate. Forensic science has grown as a profession since early 1880s and into a science in its own right in the early twenty first century. Given the public’s interest in using science to solve crimes, it looks as if forensic science has an active, even hectic future. Forensic science describes the science of associating people, places, and things involved in criminal activities; these scientific disciplines assist in investigating and adjudicating criminal and civil cases.

Forensic science would therefore mean the science which is used in the courts of justice. It can be defined more broadly as that scientific discipline which is directed to recognition, identification, individualization, and evaluation of physical evidence by the application of the principles and methods of natural sciences for the purpose of administration of criminal justice. Anthropometry, finger prints, foot prints, documents ballistic, odontology, serology, were essentially developed to aid the criminal justice administration.

Prior to the establishment of the forensic science in India, there were a few rudimentary scientific facilities

available to the police in the form of finger print bureau and scientific sections which provided examinations of fire-arms, foot prints, questioned documents and photography. All these were available under the state CID set up. In the second quarter of the twentieth century, forensic science laboratories were established in different parts of the world. In India, too, the growing awareness among the police and the judiciary, the role science played in scientific evaluation of material clues, led to setting up of forensic science laboratories in the states as well as at the center.

The most important function of scientific evidence is to convert suspicion into a reasonable certainty of either guilt or innocence. The various reasons for which a scientific examination may be made can be classified under the heads of the following questions:

Has a crime or tort been committed, how and when was the crime committed, what information can in general way be obtained as to the identity of the perpetrator are the question probably arises when an article of clothing has been left at the scene of the offence. A proper examination of this may disclose the hair color, approximate height, occupation, etc. but the ultimate and the most vital question is: are the accused man and the person characterized as having committed the crime in fact one and the same person? The investigation of a single crime perhaps needs answering to all these points.

Among men, the investigating officer is the most important person. In fact, it is he whose work determines the success or failure of the application of forensic science in the processing of a criminal case.

II. BETTER EVIDENCE

The physical evidence evaluated by an expert is objective. If a fingerprint is found at the scene of crime, it can belong to only one person. If this person happens to be the suspect, he must account for its presence at the scene. Likewise, if a bullet is recovered from a dead body, it can be attributed to only one firearm. If this firearm happens to be that of the accused, he must account for its involvement in the crime. Such evidence is always verifiable.

III. ESTABLISHMENT OF IDENTITY OF A PERSON:

By the identification of a person is meant the establishment of his individuality. Identification may be complete or partial.

The data are supplied by the bodies which assist in the establishment of identity:-

Race, Sex, Age, Religion and caste, Social standing, General development, congenital peculiarities (eyes, hair, appearance, finger prints, birth marks), Acquired peculiarities (scars, tattoo marks, stains, malformations)

IV. DETERMINATION OF AGE

Age has obviously an important bearing on identification. In this connection absolute accuracy is seldom if ever required, except in the case of the new born child or to determine the age approximately; and in most cases this is all that is possible.

Apart from the question of identification the establishment of age may be required in several other connections.

In the absence of reliable documentary evidence, questions regarding age are always referred to a medical man. In the circumstances in which this question are often referred to the practitioner, they must be difficult. It is only when doubt exists that the doctor's opinion is sought. No court will call for expert's evidence to prove that an obviously adult woman is or is not over the age of fourteen. It is in the case of the girl who is just under or just over the age of fourteen that the medical man will be consulted. when it is realized that if, for instance, a girl is one day under the age of fourteen, a man may be guilty of a serious offence, while if she has reached that age no offence has been committed, the great responsibility laid on the medical man will be apparent. The medical witness should, in such case, not only exercise the greatest caution in coming to an opinion but should be prepared to admit the possibility of his estimate being wrong, as it quiet possibly may be.

The determination of age may be required for the identification of an individual, living or dead. In criminal cases, it is necessary in connection with offence of rape, abduction and infanticide, also to determine whether a child has reached the age at which the law holds it responsible for its act, and if so, what manner of punishment or restraint should be imposed in it. In civil cases, the question arises in numerous relations, e.g. in the making of wills, capability as witness, employment under the Indian factories act, etc.

V. METHODS OF ESTIMATING AGE

All the human beings occupying this globe belong to the same species i.e. Home sapiens. No two individuals are exactly alike in all their measurable traits, even genetically

identical twins differ in some respects. These traits tend to undergo change in varying degree from birth to death and disease, and since skeletal development is influenced by a number of factors producing differences in skeletal proportions between different geographical area, it is desirable to have some means of giving quantitative expression to variation which such traits exhibit.

- ✚ Age of fetus can be determined by noting the presence or absence of the developmental changes that take place at the different period of intra-uterine life.
- ✚ Age of an infant can be decided based on weight. Also, the first teeth begin to appear.
- ✚ Age of a child can usually be formed by anyone who has / had to do with children, the indications being the general physical and mental development of the child. A mother of the children will generally be a better authority than the doctor. Milk teeth also appear during this time.
- ✚ Age of adolescent boys can be noticed by change in voice, traces of muscularity, pubic and axillary hair appears, beard and mustaches begins to appear, external genital organs begins to approximate adult type. Penis loses its infantile character.
- ✚ Age of adolescent girls can be noticed by swelling breasts, widening hips, pubic axillary hair appears, the period of puberty is initiated by menstrual flow.
- ✚ The average child on reaching the age of puberty is already in possession of a complete set of permanent teeth but for the four wisdom teeth.
- ✚ Age of an adult can be estimated by five factors:-
 1. Teeth- the young adult is normally equipped with a set of 28 teeth plus one or more wisdom teeth, in good condition. The teeth show no signs of wear and tear nor, in spite of early adoption of pan chewing practice.
 2. General appearance-An estimate based entirely on appearance may well be faulty by ten or more years. In forming an opinion as to the age of a person by his appearance a medical man has no advantage over an observant layman.
 3. Height and weight- age can be estimated based on average of height and weight.
 4. Ossification-the extent of ossification may give evidence that a person though an adult is still young; later it may form an indication of old age.
 5. Degenerative changes- Wrinkles, grey hair, etc. are signs that an individual has passed his prime. The extent to these changes may enable one to form an idea as to a person's age.

VI. EVIDENTIARY VALUE OF MEDICAL OPINION

Forensic science is the science used for legal interpretation of evidence. It is a law relating to experts and

scientific evidence. Experts are defined under section 45 of the Evidence Act, 1872:

“When the court has to form an opinion upon a point of foreign law, or 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 question as to identify handwriting or finger impressions. Such persons are called Experts.

Medical Opinion as to the age of injury cannot be regarded as conclusive as in the medical examination it is only approximate tenure of time can be ascertained, and the opinion can never be exact and allows concession of sometime upward or downward. Medical opinion cannot have any binding force and cannot also be said to be last word on what he deposes is to be implicitly accepted; on the other hand his evidence like the evidence of any other witnesses is liable to be shifted, analyzed and tested.

Expert evidence must be used not as a piece of substantive evidence of a conclusive nature but as a piece of corroborative evidence to other evidence in the case. The corroborative evidence in order to be of any value must be on material particulars and the facts relied on for the corroboration must be established by reliable and independent evidence. The expert evidence is weighed in the same way as other evidence. The court is not bound to accept the opinion of an expert automatically, but the grounds on which he gives his opinion would carry value to the evidence.

For the purpose of proving the age of a person the only surer is School Leaving Certificate. But often courts are reluctant to accept such certificates under corroborated by some other relevant evidence. There is every possibility of false age being recorded. But the documentary evidence has to be given priority in proof of the age over the Medical opinion since there is always possibility of variation of two years either way on various in the medical estimation of the age . Whenever the age of a person is in question and in absence of substantial proof of the correct age, opinion of medical expert becomes a matter of importance. Medical evidence cannot be regarded as conclusive proof of age and the accused is entitled for benefit of doubt.

VII. REQUIREMENT OF DETERMINATION OF AGE

Very often medical opinion is sought to be proved in civil and criminal proceedings for the purpose of estimating the age of a person. In civil cases, age is required to be estimated in the absence of other evidence to find out whether the person was a minor or major when a document was

executed by him. In criminal case the age of a person is required to be proved in order to know whether the person is below 7yrs or juvenile. Under the following circumstances the determination of age is required:

- When the age of accuse is uncertain i.e. whether he is juvenile
- When the age of prosecutrix is uncertain under sec. 375 of IPC
- When the party executing the contract is minor or major
- For the Custody of the child
- For marriage
- For determining Judicial punishment
- Child labor under Factory and Mines Act

VIII. ISSUE OF DETERMINATION OF AGE

In India, it is evident that responsibility increases with age. From the various instance, it can be envisaged that the accused, who is minor is given benefit of their immaturity and always being forgiven for their misconduct/ mischief. Indian Penal Code is not exception to this therefore, under Sec. 82 of IPC any offense committed by the child who is below the age of 7 years is cover under the general exception so he will neither be penalized nor imprisoned. Nothing shall be an offence which is done by a child under 7 years of age. But there is Criminal responsibility on the accused who is of 7 yr to 12 yrs. As per sec. 83 of IPC nothing shall be an offence which is done by a child above 7 years of age and under 12, who has not attained sufficient maturity of understanding to judge the nature and consequences of his conduct on that occasion. It was held in *Queen v. Lakhini* that non attainment of maturity in case of a child over 7 and below 12, would have apparently to be specially pleaded and proved. Under sec. 105 of the Indian Evidence Act, the burden of proof is on the accused to show that he comes under the General Exception of IPC or under any other proviso of the section.

The repercussion of the circumstance where the accuse is minor after determining its age by documentary evidence or medical evidence then accuse will come under the ambit of Juvenile Justice Act and will have separate trial by the Juvenile Justice Board. In the context of juvenile legislation in India, a juvenile is a person who has not completed eighteen years of age. Age of majority as per Indian perspective is 18yrs.

He will be exempted from the criminal proceeding. With regard to this the accuse will be send to observation home where he is taken care and protected from the other hardcore criminals. The motto of such separate trial from other criminals is to adopt the reformative approach by diverting the mind of juvenile from criminality.

Section 360 of Criminal Procedure Code, 1973, provides that when any person under 21 years of age is convicted of an offence not punishable with death or imprisonment for life, and no previous conviction is proved against the offender, if it appears to the court before which he is convicted, regard being had to his age, character, or antecedents of the offender and to the circumstances in which the offence was committed, that it is expedient that the offender should be released on probation of good conduct, the court may, instead of sentencing him at once to any punishment direct that he be released on his entering into a good bond, with or without sureties, to appear and receive sentence when called upon during such period (not exceeding 3 years) as the court may direct and in the mean time to keep peace and be of good behavior. Section 6 of The Probation of Offenders Act, 1958, unlike section 360 of Cr.P.C., makes it obligatory for the Court not to sentence offender to imprisonment when he is under 21 years of age and has committed an offence punishable with imprisonment, but not with imprisonment for life. The court has to record its reasons for not dealing with the offender under section 3 or 4 of the Act. In not taking action under section 3 or 4 of the Act, the court has to consider the circumstances of the case including the nature of offence and the character of the offender.

The best evidence of age is the entry in the birth and death register as it is made by competent authority, but when such evidence is not available the accused should be medically examined, and a definite finding with regard to age should be recorded by the magistrate in each case, and if the accused on inquiry is found to be a juvenile, the matter should be transferred to Juvenile justice board.

To make the report of the radiology admissible it is necessary to see that the all the factors for determining age are considered. Age determination has been a tricky and controversial issue in juvenile justice. In *Jaya Mala v. Home Secretary, Government of J&K* the apex court held that the age as ascertained by medical examination is not conclusive proof of age. It is mere opinion of the doctor and a margin of 2 years could be on either side. The question arises when the age of accuse is between 17-19yrs then either inference can be drawn that accuse is considered as 17yrs which will result him as juvenile and therefore he must be tried by Juvenile Justice Act. Otherwise, accuse is treated as 19yrs then he will have to abide by regular criminal proceeding. Therefore, it is duty of the court to look after that justice is done and no juvenile becomes sufferer of the strict rule. Through judicial precedent it is settled rule that when there is ambiguity with respect to age of the accused then benefit of doubt goes to accused.

Generally the age of the prosecutrix is determined by her birth certificate. Otherwise, prosecutrix has to undergo medical test for determining her age. Thus, Forensic Science helps the court with radiological report to arrive at a conclusion with regard to the age of victim or accuse. For Instance, when the age of the prosecutrix is determine as 14-16 then as per sec. 375 when the girl is of below 16 year of age, the court shall be presume that the girl has not consented for sexual intercourse therefore the accuse cannot take defense of consensus intercourse. It is more critical situation for the court to decide when the age of the prosecutrix is determined between 15-17 years either to consider minimum age i.e. 15 or latter age i.e. 17. After different judicial interpretation now it is settled law that when there is dispute regarding age of prosecutrix then benefit of doubt goes to accuse.

That medical evidence is not conclusive regarding age of a person is a well settled proposition of law. *M. A. Ajij V/s. State*, was a case where the age of a girl in relation to an offence under S. 376, IPC was in question where the trial court had come to the conclusion exclusively basing on the evidence of PW 3 who had held the ossification test, that the age of the girl was below 18 years. After analyzing the evidence in detail the Court held that the case was a border line one, that the medical evidence of age cannot be of mathematical precision, that it is all the more risky to convict somebody solely on the basis of medical evidence which is likely to vary and that in a border line case it would not be proper to solely rely on the medical evidence regarding age. It was held that the onus lies squarely on the prosecution to prove the age as being below 18 years. The view of resolving the doubt in such a case in favor of the accused was also adopted in *Raunki Saroop v State*.

It is hard look of law where it's the juvenile at the end who faces it. Sometime many children who look older than their age, they themselves don't know how old they are, and they don't have proper age proof since they belong to a family of migrant workers these kids are then tried as adults and are thrown into prisons by traditional method of determining age but now with help of forensic science it is easy to derive the age in question by medical examination.

In Criminal law, it is well said dictum that 'even though 100 accuse are set free but no innocent should be punished'. This maxim has outcome with rule that benefit of doubt must go to accuse. Therefore, it is prerequisite for the prosecution to prove its case beyond reasonable doubt to make conviction. Another golden thread that runs through the web of administration of criminal justice is that if two views are possible on the evidence - one pointing to the guilt and other towards innocence, the view which is favorable to the accused should be accepted. It seems to be very similar to the principle, called Benefit of Doubt goes to batsman in Cricket

game. As per Interpretation of penal law when there is small particle of suspicion in the conviction then the court will take the view which is favorable to accuse. Similarly, when there is unspecified age by respect of radiology report and no other documentary evidence to support the prosecution case then the court will take a view which will be beneficial to accuse as per the cardinal rule that benefit of doubt will go to accuse.

IX. CONCLUSION

"The heinous nature of the crime. The cover-up afterwards. The denial. They were all, to me, earmarks of someone who was acting as an adult."-Gary Gambardella

The above quote summarizes the methodology adopted to hoodwink the Indian criminal system by hardcore criminals. The lenient provisions of the juvenile justice act like a window of opportunity which can be exploited to the fullest.

The issue of age determination possibly the biggest loophole when it comes to misusing the statute that was legislated with the intent of being child friendly and the objective of meeting the requirements of Conventions on the Rights of the Child.

The reference to the Mumbai attack case is the best example which demonstrates the misuse of legislation where the terrorist-accuse pleaded himself to be juvenile and tried to defend himself. The court after medical examination arrives at the conclusion that accuse was not a juvenile and as such was to be tried at regular court and not at the juvenile justice board. It depicts the juvenile justice act as a weak link in the chain of our criminal system which can be exploited by anti-national elements waiting in the wings for an opportunity to endanger our national security. It has set a same yardstick for every criminal without distinguishing whether hardcore criminal or petty offender among young offenders.

Problems with regard to harsh treatment by police and difficulties with regard to age verification continue to plague this otherwise humane act. Skeptics believe that there is a chance that the guilty will misuse the law to get away with a lighter sentence.

There is a wide debate in India on the issue that whether laws hold promise of justice for victim who have been sufferer of violence or accuse. "Justice cannot be for one side alone but must be for both."

One of the most admirable things about history is , that almost as a rule we get as much information out of what it does not say as we get out of what it does say.

And so, one may truly and axiomatically aver this, to wit: that history consists of two equal parts; one of these halves is statements of fact, the other half is inference, drawn from the facts.....

When the practiced eye of the simple peasant sees the half of a frog projecting above the water, he unerringly infers the half of the frog which he does not see.

To the expert student in our great science, history is a frog; half of it is submerged, but he knows it is there, and he knows the shape of it.

-----Mark Twain

REFERENCES

Books:

- [1] Dr. V. Krishnamacharya; Law of evidence, S. Gogia & Company, Hyderabad, 6th edition 2011
- [2] Nandi A. K., Indian Evidence Act, 1872, Kamal Law House, Calcutta, 6th edition, 2010
- [3] Gour S.N., Lyon's Medical Jurisprudence For India, Allahabad, Laaw Publisher Pvt. Ltd., 10th edition, 1988
- [4] Houck Max M., Forensic Science: Modern Methods Of Solving Crimes
- [5] Modi's Medical Jurisprudence

Websites:

- [1] <http://www.orange.k12.oh.us/teachers/ohs/tshreve/apwebpage/readings/juvcrime19cbr.html>
- [2] http://books.google.co.in/books?id=uvGI134Q_tcC&pg=PA266&1pg=PA266&dq=1st
- [3] <http://lawyersclubindia.com/articles/BEYOND-REASONABLE-DOUBT-880.asp>
- [4] http://www.tehelka.com/story_main50.asp?filename=Ws120911LAW.asp