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FORENSIC LAW

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I INTRODUCTION

FORENSIC TECHNOLOGY, over the years, has braced the judicial system to bring out the truth by way of expert opinion. In addition to eye witness, corroboration is the hallmark to ensure perfection in delivery of justice. The apex court of India has also confirmed the importance of circumstantial evidence by regarding it more reliable than an eye witness and that the basic principle of circumstantial evidence is that it should be consistent with the guilt of the accused and inconsistent with innocence of the accused.¹ The Supreme Court of India has referred to Lord Coleridge who compared circumstantial evidence to a gossamer thread, light and as unsubstantial as the air itself which may vanish at the merest of touch.² According to Russell, any person who is skilled or has adequate knowledge in a particular field is called an expert, derived from Latin maxim *Expertocrede* means that an expert is to be generally believed.³ Over the years, expert opinion achieved global acceptance based on scientific doctrines, accredited procedures and protocols. The reliability of an expert opinion may be determined by a court by examining (i) educational background of expert in the domain field, (ii) practical knowledge in the subject, (iii) careful analysis in arriving at the conclusion opined, and (iv) ability to explain with expertise how he arrived at the given conclusion.⁴

The present *survey* is an analytical account of various judicial pronouncements during 2017 by the constitutional courts of India under the evolving legal trends on

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1 *Sanatan v. State of West Bengal*, 2010 Cr.L.J. 3871.

2 *Musheer Khan @ Badshah Khan v. State of Madhya Pradesh* (2010) 2 SCC 748 : 2010 (2) J.L.J. 104 : 2010 (2) SCR 119. The quote was referred in *Aju @ Ajay v. The State of Madhya Pradesh*, Crim. Ref. No. 1/2014, Madhya Pradesh High Court, 19 May 2017 (Unreported).

3 *Bhavanam Siva Reddy v. Bhavanam Hanumantha Reddy* 2017 (4) ALT 682.

4 *Naveen Krishna Bothireddy v. State of Telangana* 2017 INDLAW HYD 582, 2017 CRLJ 3548.

Criminalistics⁵ and evidences while adjudicating on both civil and criminal matters. This survey discusses nearly seventy cases and relevant legal provisions while adjudicating on various cases. Several issues significant in forensic sphere such as relevance of the principles of testimonial compulsion, contamination and manipulations of forensic samples, role of chain of custody, consent etc. have been discussed in the light of relevant judicial pronouncements. The investigating agencies have used bundles of forensic evidence like DNA profiles, fingerprints, voice analysis, bite marks, CCTV Footage, cyber footprints etc. for the purpose of corroboration, which shall be deliberated in the subsequent sections of the extant survey. Two sensational criminal cases namely the *Arushi* murder⁶ and Delhi gang rape (the *Nirbhaya* case)⁷ have been adjudicated by the constitutional courts during 2017. In the *Nirbhaya* case, the significance of DNA was enunciated by the Supreme Court as under:⁸

DNA evidence is now a predominant forensic technique for identifying criminals when biological tissues are left at the scene of crime or for identifying the source of blood found on any articles or clothes, etc. recovered from the accused or from the witnesses. DNA testing on samples such as saliva, skin, blood, hair or semen not only helps to convict the accused but also serves to exonerate. The sophisticated technology of DNA fingerprinting makes it possible to obtain conclusive results.

The Supreme Court reiterated the forensic significance of DNA by saying⁹

DNA report deserves to be accepted unless it is absolutely dented and for non- acceptance of the same, it is to be established that there had been no quality control or quality assurance. If the sampling is proper and if there is no evidence as to tampering of samples, the DNA test report is to be accepted.

The right to privacy has been declared as an integral component of the right to life with dignity in *Justice K. S. Puttaswamy (Retd.) v. Union of India*¹⁰. Privacy and informed consent are intertwined concepts and both are to assist a magistrate to decide

5 Criminalistics may be defined as the application of scientific methods to recognition, collection, identification and analysis of physical evidence from scene of crime or unlawful civil activity. It also involves reconstruction of the crime scene.

6 Dr. (Smt.) *Nupur Talwar v. State of Uttar Pradesh* 2017 SCC OnLine All 2222 : (2018) 102 ACC 524 : (2018) 188 AIC (Sum 26) 11 : MANU/UP/2639/2017.

7 *Mukesh v. State (NCT of Delhi)* (2017) 6 SCC 1 : 2017 SCC OnLine 533: MANU/DE/3151/2014.

8 *Id.* at para 457.

9 *Id.* at para 224 (Deepak Mishra J.) referred para 20 of *Nandlal Wasudeo Badwaik v. Lata Nandlal Badwaik* (2014) 2 SCC 576.

10 (2017) 10 SCC 1.

for directing the subject for tendering bodily samples for forensic examination. The apex court has observed that fingerprints, DNA Profiles and cellular samples constitute 'personal data'. The court referred to the Grand Chamber 18 judges at ECHR in *A and Marper v. United Kingdom*¹¹ where it was held that "[T]he DNA profiles' capacity to provide a means of identifying genetic relationships between individuals ... is in itself sufficient to conclude that their retention interferes with the right to the private life of the individuals concerned... The possibility the DNA profiles create for inferences to be drawn as to ethnic origin makes their retention all the more sensitive and susceptible of affecting the right to private life."¹² The judicial interpretation to expand the scope of privacy as fundamental right has direct bearings on forensic sampling, search and seizure, disposal of residual samples etc. Indeed the law enforcement agencies now must strictly observe due process of law in addition to standard protocols while dealing with various aspects of forensics. Various legal issues having importance in forensic dominion observed during this annual survey have been briefly discussed below.

II CIVIL DISPUTE RESOLUTION

Forensic evidence, especially DNA plays significant role in parentage determination with greater precision. An aggrieved wife challenged the order of trial court for not permitting DNA test for paternity determination of her child for claiming maintenance under section 12 of the Domestic Violence Act, 2005.¹³ The judicial magistrate had observed that maintenance under section 125 Criminal Procedure Code, 1973 is enabled even for illegitimate children and hence declined permission for DNA test. The Himachal Pradesh High Court referred to *Indra Sarma v. V.K.V. Sarma*,¹⁴ where the apex court has distinguished the 'live-in-relationship' with that 'relationship in the nature of marriage'. It was held that all 'live-in-relationships' are not relationships in the nature of marriage. It was further observed that relationship to qualify as 'relationship in the nature of marriage' should have some inherent or essential characteristics of a marriage though not a marriage legally recognized. The high court *set aside* the trial court order by observing that truth is the cornerstone of justice delivery system. Judges at all levels must undertake serious engagement with the discovery of truth which is their mandate, obligation and bounden duty and upon which the faith of people is based.¹⁵

A suit for paternity determination was filed by an old couple in the trial court against Dhanush, an Indian cine star, for claiming maintenance. Later Dhanush filed a petition before the Madras High Court to call records from magistrate court.¹⁶ He

11 291 [2008] ECHR 1581

12 *Supra* 10 at para 223.

13 *Sharda v. Surat Singh*, ILR 2016 4 HP 2170 : 11 (2017) DMC 858 HP.

14 (2013) 15 SCC 755.

15 *Id.* at para 16.

16 *Kalaichelvan @ Dhanush K.Raja v. R. Kathiresan and K. Meenakshi @ Meenal*, 2017-1-L.W. (crL) 662 : (2017) 2 MLJ (CrL) 498.

voluntarily submitted himself before a board of medico-legal experts constituted by the high court to undergo medical examination for verification of bodily marks for identification mentioned on the school certificate submitted by the old couple. The medical expert responded to a query by observing that although it is possible to remove a small superficial mole completely but a scar cannot be obliterated by plastic surgery and medically only scar reduction is possible.¹⁷ The high court turned down the demand of the couple for conducting DNA enquiry by citing observation of the apex court in unequivocal language that a person who wants DNA test for paternity, should make out a *prima facie* case before the court to exercise its power.

In yet another case, the petitioner, a husband, demanded before the Karnataka High Court to allow DNA test for paternity determination of the child in order to establish adulterous conduct of his wife.¹⁸ The high court cited the observation of the apex court that if it is possible to withhold the direction for carrying out such a test, then such a test should be avoided.¹⁹ The petition was dismissed since the husband himself had admitted access to his wife; hence ingredients of section 112 of the Indian Evidence Act, 1982 were applicable to safely presume that child is legitimate. The high court further observed that the DNA test would not throw any light on the adulterous behaviour of the wife.²⁰

In fact the legal conundrum has arisen due to juridical preference for DNA led paternity determination instead of considering conclusive proof of paternity of a child born under lawful wedlock as enshrined under section 112 of the Indian Evidence Act, 1872.²¹ Forensic intervention in family domain may explore the stark truth of marital infidelity, but it potentially defeats the best interest of a child by branding him/her as 'fatherless', contradicting with the five guidelines culled out by the apex judiciary in *Goutam Kundu v. State of West Bengal*.²² The legal paradox was raised before the apex court and matter is pending with the Chief Justice of India for referring to the larger Bench.²³

III CRIMINAL ADJUDICATION

Fairness in investigation is precursor to fair trial. Scientific aids, especially forensic tools enhance transparency, fidelity and accuracy to brace fairness in administration of justice. The aim of investigation is ultimately to search for truth and to bring

17 *Id.* at para 12.

18 *K.S. Siva Das S/O Mohan Das v. Dr. K. Lekha*, MFA No. 103098 of 2015 2018 CHLJ317 : 2017-I-LW (cri) G62 2017 (2) MLJ (cri) 498.

19 *Dipanwita Roy v. Ronobroto Roy* (2015) 2 SCC 94.

20 *Supra* note 18 at para 11.

21 *Supra* note 19. Also see: *Nandlal Wasudeo Badwaik v. Lata Nandlal Badwaik* (2014) 2 SCC 576.

22 1993 AIR 2295 : 1993 SCR (3) 917.

23 *M.S.Vidya Rani v. K. Ravi Chandra* MANU/SCOR/00890/2017.

offenders before law.²⁴ Blending of science with traditional criminal investigation techniques offers new horizons of efficiency in criminal investigation, which reduces dependence upon informers and custodial interrogation and concentrates upon skilled scanning of the crime scene for collection of physical evidence. The apex court in *Pooja Pal v. Union of India*²⁵ has described the object and scope of free, fair and proper investigation. The court has observed that the expression ‘fair and proper investigation’ in criminal jurisprudence was held by this court in *Vinay Tyagi v. Irshad Ali*²⁶ to encompass two imperatives that the investigation must be unbiased, honest, just and in accordance with law; and secondly, the entire emphasis should be on discovering the truth of the case before the court of competent jurisdiction.²⁷ The High Court of Madhya Pradesh observed that crime investigation traverses in the dark and oscillates between known and unknown with the sole object of arriving at the truth”.²⁸ The aid of foreign law expert can also be sought under section 45 of the Indian Evidence Act.²⁹

The High Court of Karnataka observed that DNA mapping and its result is almost near perfect scientific tool in criminal investigation to establish the identity of a deceased.³⁰ High Court of Madhya Pradesh in *Ajju @ Ajay v. The State of Madhya Pradesh*³¹ has accentuated the emphasis on DNA evidence and training of various stakeholders. The court observed:³²

It (DNA) is a recently developed impeccable scientific technique in determining the identity of a person alleged to be involved in crime provided the crime-related DNA samples are properly collected, not tampered with or not contaminated and the DNA analyst correctly matches them with duly obtained DNA sample from the person concerned. Now-a-days, DNA profiling is being increasingly used by the investigating agencies to nab culprits especially in those cases where the ocular evidence is not forthcoming. To safeguard the interests of culprits, the persons who have collected crime-related DNA samples and the DNA analysts are required to be cross-examined effectively by their advocates. It is only possible when they know the areas where the DNA samples collectors may make irregularities in collecting them or

24 *Manohar Lal Sharma v. Union of India* (2014) 2SCC 532.

25 (2016)3 SCC 135.

26 (2013) 5 SCC 762.

27 *Id.* at para 88.

28 *Jitendra Singh Narwariya v. The State of Madhya Pradesh*, 2017 (111) MPJR (SC) 23, MANU/MP/0827/2017

29 *Dhirajlal @ Dhirubhai Babaria v. Navibhai C. Dave* MANU/MH/1934/2017.

30 *Smt. Rajeshwari Shetty v. The State of Karnataka* MANU/KA/0811/2017 (para 13).

31 Available at: <https://indiankanoon.org/doc/74673692/> (last visited on 18 March, 2019).

32 *Id.* at para 87.

the DNA analysts may make mistakes at the time of matching the DNA profiling. Keeping in view the aforesaid, we request the State Bar Council of Madhya Pradesh to make efforts to enlighten lawyers as to how the aforesaid persons can be effectively crossed by arranging lectures of experts of the DNA field and by making lawyer available exhaustive reading-materials in this regard. We have come across that in the United State of America if the prosecution case is entirely based upon the DNA evidence, then it is mandatory for the prosecuting concerned agency to get the DNA samples analyzed by the two recognized laboratories without disclosing each other the fact that the DNA samples are also sent for analysis to another laboratory as well. If the reports of both the laboratories are same, then the prosecution is launched. Hence, we also request to the investigating agencies to follow the suit in this regard.

Various issues related to forensics in criminal law administration observed during the extant annual survey are deliberated as under:

Judicial observations on deception detection techniques

High Court of Rajasthan in *Pappuram v. State of Rajasthan*,³³ held that if accused has not demanded to conduct deception detection tests (DDTs) such as narco-analysis, brain mapping or polygraph (lie detector test) at time of investigation, it may not be permitted during trial. The high court further opined that in *Moti Ram v. State of Rajasthan*,³⁴ *Dr. Purshottam Swaroopchand Soni v. State of Gujarat*³⁵ and *State of Gujarat v. Inayat Ismail Vohra*³⁶ the high courts have permitted to conduct these tests but under different circumstances.

Consent for facing forensic test

Free and informed consent to conduct specific forensic test may be a pre-requisite to protect privacy of the subject. The High Court of Bombay dealt with a legal issue on consent where court permission was granted only for conducting polygraph test but in addition the accused was subjected to Brain mapping and narco-analysis. In this regard observations made by the apex court in the *Selvi* are quite apt³⁷ wherein it is held that no individual, whether its criminal investigation or otherwise should be forcibly subjected to any of the techniques in question, and doing so would amount to an unwarranted intrusion into personal liberty.³⁸ The high court held that free and informed consent of the accused is *sine qua non* for conducting DDTs and physical,

33 2017 LawSuit (Raj) 263 (Unreported).

34 2013 (2) Cr.L.R. (Raj.) 1045.

35 (2007) 2 GLR 2088.

36 2013 SCC OnLine Guj 5948.

37 *Selvi v. State of Karnataka* (2010) 7 SCC 263 : AIR 2010 SC 1974.

38 *Id* at para 264.

emotional and legal implications of these tests must be communicated to the subject as per the guidelines for administration of Polygraph Test (lie detection test) on an accused issued by the National Human Rights Commission in 2000.³⁹

High Court order to conduct DNA test

Potential of DNA for advancing justice is well known but this potent forensic tool still suffers from 'cherry picking' approach of investigating agencies. Despite specific provisions under section 53A and 164A of the Code for Criminal Procedure, the use of DNA in investigation of sexual offences is not encouraging. The Karnataka High Court ordered to conduct DNA test and to re-conduct trial in an acquittal of rape incidence.⁴⁰ The adolescent prosecutrix was raped by her neighbour and was threatened to remain silent. Consequently, delayed disclosure of pregnancy led to her delivering a child. DNA established beyond any reasonable doubt that the accused was the author of the crime since he was the biological father of the child born to the prosecutrix. The appeal was dismissed and conviction was upheld by the high court with observation:⁴¹

Therefore, it follows that she was virtually incapable of warding off the impending danger of sexual assault on her. The accused appears to have taken advantage of her imbecility and was emboldened to repeat the acts knowing fully well that she was not in a position to offer resistance to his illegal acts. In the said background, the mental deficiency of the prosecutrix cannot be taken as a circumstance to doubt or disbelieve her evidence. Mental deficiency of a witness cannot render his or her testimony unworthy of credit if the facts narrated by witness are found trustworthy and reliable.

Right of an accused to demand forensic test

Equitable justice demands equal opportunity to be extended to the accused also as a matter of right for proving his innocence by way of using forensic evidence. However, investigation in India is police driven and hardly receptive to suggestions of accused or victim for using forensic evidence. The trial court order rejected the request of a father accused of rape and impregnating his 13 years old daughter, to conduct DNA test to prove his innocence and convicted him. He filed an appeal for challenging the trial court order. The Guwahati High Court allowed the appeal by observing that although the present case does not pertain to the ascertainment of the parentage of the child, nevertheless, if after the DNA test a connection can be established between the DNA profile of the accused and that of the said child that

39 *Irfan @ Shairu v. State of Rajasthan* available at: <https://indiankanoon.org/doc/191894626/> (last visited on 18 March, 2019).

40 *Pradeep @ Pradeep Koraga v. State By Karkal Police*, Crim. Appeal No. 1492 of 2016, Karnataka HC, 14 October, 2017 (Unreported).

41 *Id.* at para 10.

would amount to the conclusive proof of the fact of rape. On the other hand, if their profiles do not match, the accused petitioner can raise certain grounds in his defence on the charge of rape.⁴² Later, DNA of the accused matched with the child reinforcing the factum of rape. The appeal was dismissed and conviction order was upheld.

Chain of Custody and Quality Control

Contamination and manipulation remain the biggest threats to inviolability of forensic samples besides maintaining the chain of custody (CoC) which are *sine qua non* for probity of expert opinion. The apex court, in this context confirmed the tremendous impact that DNA profile has had on scientific investigation, lauded its reliability and validity and further admitted that any variance in a particular result depends on the quality control and quality procedure in the laboratory.⁴³ The burden of proving that DNA report was vitiated for any reason lies on the accused.⁴⁴ In fact accused hardly gets any access to proceedings of sampling or analysis in laboratory, hence in the interest of justice; it is desirable that standards for forensics must be robust to avoid any kind of manipulation at any stage.

The Maharashtra High Court in *Vijay S/o Shamu Nagfase and Atul Hatwar v. State of Maharashtra*⁴⁵ held that if the DNA report is dented and it is established that there has been minimal or no quality control or quality assurance and if the sampling has been improper and that there is evidence to show tampering of the samples, it would be unsafe to make a conviction based on the said DNA test report.⁴⁶ In this gang rape, the DNA profiles matched with the accused but based on certain procedural lacunae, the high court set aside conviction order of the trial court to acquit the accused persons. However, vital question that remained unanswered was how, despite all procedural discrepancies on the part of prosecution, semen stains of the accused persons were detected on the clothes of the prosecutrix, moreover the defense never claimed to have consensual intercourse with the prosecutrix. Neither there was any evidence on record nor claim by the defense that semen was subsequently collected by anyone including investigating agency from the accused persons to implant it on the clothes seized from the prosecutrix. Acquittal in such cases is likely to promote recidivism. In fact, brushing aside cogent evidence of matching DNA with all accused persons does not appear to be reasonably justified. A prosecutrix must not suffer from injustice for the lackadaisical investigation. The appellate court must arraign the police officer liable for shoddy investigation.

An appeal was filed before the Bombay high court against conviction order for gang rape of a 14 years minor girl who along with her mother was killed by the

42 *Nur Mohammad v. The State of Assam* 2017 (3) GLT 256 : MANU/GH/0379/2017.

43 *Anil @ Anthony Arikswamy Joseph v. State of Maharashtra* (2014) 4 SCC 69.

44 *Sandeep v. State of Uttar Pradesh* (2012) 6 SCC 107.

45 MANU/MH/2312/2017.

46 *Id.* at para 20.

47 *Achyut @ Bappa @ Babu v. The State of Maharashtra* MANU/MH/4032/2017.

assailants.⁴⁷ The medico-legal examination proved the commission of rape. However, DNA report was filed 'Evidence Close Pursis' by the prosecution at the last stage of trial and defense could not get opportunity to contest against the report. The accused also deposed under section 313 of Cr. PC that his semen was forcibly collected by police for the purpose of implanting it on the clothes of the prosecutrix. The DNA report could not sustain credibility to foster confidence of the court and appeal was allowed, and the accused persons were acquitted. In yet another appeal in rape case of matching DNA report, the trial court ordered acquittal since minor prosecutrix failed to identify the accused, and the accused alleged police of forcibly extracting his semen and blood after his arrest for implanting it on the clothes of the prosecutrix.⁴⁸ However, no proof was flagged to challenge the chain of custody of artefacts collected by the police. The appellate court upheld the acquittal by citing the observation of the apex court that the medical officer is not a witness to the case and his role is only to assist the court and the evidence given by the medical officer is really of an advisory character and not binding on the witness of fact.⁴⁹ However, Justice (Ms.) Hima Kohli of Delhi High Court had earlier observed that serological evidence is just one piece of evidence, which is brought on the record but expert medical evidence cannot be treated as binding on the ocular evidence.⁵⁰ In *Dayal Singh v. State of Uttaranchal*,⁵¹ the apex court observed that there is a great acceptability of expert evidence in courts but it is equally true that the courts are not absolutely guided by the report of the experts, especially if such reports are perfunctory and deliberately attempt to misdirect the prosecution.⁵²

High Court of Delhi reversed the conviction order against the accused for killing a boy because prosecution failed to establish seizure of four cigarette butts and glasses from scene of crime beyond reasonable doubt as these exhibits were not collected in presence of any independent witness.⁵³ The accused also alleged before trial court under section 313 of Cr. PC that police forced them to smoke cigarettes while they were in police custody. The high court did not rely upon the matching DNA report by observing⁵⁴

Therefore sole circumstance that the prosecution has sought to rely in support of the appellants' guilt was that the DNA from the appellants' samples matched the DNA of the saliva on the cigarette butts seized from the spot. It is to be noted that this circumstance by itself, does not establish an unbroken chain of circumstances which points unerringly

48 *State of NCT Delhi v. Azam @ Rihan*, 2017 (2) JCE874, MANU/DE/0358/2017.

49 *Vishnu v. State of Maharashtra*, AIR 2006 SC 508 at para 21.

50 *Tasleem @ Pappu v. State of NCT of Delhi 2011 AD (Delhi)325*, 2011 (2) JCC 846 at para 15.

51 (2012) 7 SCALE 165.

52 *Id.* at para 29.

53 *Arvind v. State of NCT Delhi*, CrI. Appeal No. 60/2017, Delhi High Court, on 9 March, 2017 (Unreported).

54 *Id.* at para 74.

towards the only hypothesis of the guilt of the appellants. The prosecution had to first establish by credible evidence that the cigarette butts were actually seized from the spot, as alleged. Apart from that, the prosecution was required to provide authentic and credible evidence that the deceased had smoked cigarette with the appellants shortly before he was murdered.

In another appeal, High Court of Delhi brushed aside the matching DNA report in absence of proper custody of the case property (prosecutrix under garments - source for DNA).⁵⁵ The accused, alleged of rape of his adoptee mother, was acquitted.

High Court of Punjab and Haryana in an appeal against conviction order for murder dealt with several issues on criminal investigation.⁵⁶ In this case DNA obtained from the blood stain found on the clothes of the accused was matched with the deceased as reported by investigator for filing charge-sheet. High court strangely observed that the DNA tests are of little value unless there is a connection between the blood group on the clothes and the blood group of the accused. Consequently, the petitioner accused was acquitted. Indeed DNA profiling is forensically far superior than serology as far as evidentiary value for matching biological samples is concerned. As far as perfunctory investigation is concerned, the apex court had observed that even if investigation turns out to be defective, the court must exercise circumspection in evaluating the evidence but at the same time it would not be right to acquit the accused solely on account of the said defect.⁵⁷ However, at the same time the apex court also noted that minor discrepancies pointed out by the accused do not vitiate the prosecution case.⁵⁸

Power to conduct further investigation

An appeal was filed before the apex court to decide whether trial court has power to direct the investigating agency to conduct further investigation at the stage when cognizance of criminal case has already been taken by a court. The magistrate in a land dispute case directed police to seek report from forensic science expert on the allegedly forged signature and thumb impression in the register of notary. In the light of the reference of the 41st Report of the Law Commission of India, the High Court set aside the trial court order. The apex court, dismissed the extant appeal by observing that⁵⁹

On an overall survey of the pronouncements of this Court on the scope and purport of Section 173(8) of the Code and the consistent trend of explication thereof, we are thus disposed to hold that though the

55 *K v. The State (NCT of Delhi)*, available at: <https://indiankanoon.org/doc/199990368/> (last visited on 18 March, 2019).

56 *Ram Kumar Kalyan v. State of Haryana* MANU/PH/0235/2017.

57 *Dhanaj Singh v. State of Punjab* (2004) 3 SCC 654 : 2004 SCC (Cri) 851 (para 5).

58 *State of Himachal Pradesh v. Sanjay Kumar alias Sunny* (2017) 2 SCC 51; *State represented by Inspector of Police v. Saravanan and Another* (2008) 17 SCC 587.

59 *Amrutbhai Shambhubhai Patel v. Sumanbhai Kantibhai Patel* (2017) SCC OnLine SC 86.

investigating agency concerned has been invested with the power to undertake further investigation desirably after informing the Court thereof, before which it had submitted its report and obtaining its approval, no such power is available therefore to the learned Magistrate after cognizance has been taken on the basis of the earlier report, process has been issued and accused has entered appearance in response thereto. At that stage, neither the learned Magistrate *suo motu* nor on an application filed by the complainant/informant direct further investigation. Such a course would be open only on the request of the investigating agency and that too, in circumstances warranting further investigation on the detection of material evidence only to secure fair investigation and trial, the life purpose of the adjudication in hand.

Human identification by using forensic tools

In *Mukesh v. State of NCT Delhi*,⁶⁰ (*Nirbhya* gang rape case) the apex court relied upon battery of forensic evidence like DNA test, fingerprints, footprints, bite-mark analysis, CCTV footage etc. to identify six assailants who displayed bestial proclivity and inconceivable self-obsession in a gang rape and subsequent death case involving a 23 years old para medical student. The bite mark analysis, known as *odontology* report also assisted to identify two accused persons.⁶¹ The co-victim, a male friend of the prosecutrix was also beaten up but he could survive.

In a criminal case, on the instance of the accused, the dead body of a 13 years boy kidnapped for ransom was recovered from a well. The hairs found in the right hand of the deceased were matched with DNA of one accused leading to confirmation of death penalty by Madhya Pradesh High Court.⁶² The High Court also directed the State Police Chief to instruct the investigating officers to use DNA in criminal cases for the purpose of human identification. In yet another appeal, the High Court reversed the conviction order to acquit a habitual offender for lack of corroborative evidence especially in absence of credible identification of deceased putrefied dead body.⁶³ The court emphasized upon DNA test for human identification and directed the police authorities as under:⁶⁴

The whole case is based on circumstantial evidence. A highly decomposed dead body was floating in a well. Even at the time of inquest, there were no witnesses to identify the dead body. Under these circumstances, the investigating officer ought to have collected blood

60 (2017) 6 SCC 1.

61 *Id.* at para 233 - 242. (J. Deepak Mishra).

62 *Rajesh @ Rakesh v. The State of Madhya Pradesh* MANU/MP/0356/2017.

63 *Gopu Srinivas Reddy @ Parandamulu v. The State of Andhra Pradesh*. Crim. Appeal No.114 of 2011, AP High Court, decided on 11-08-2017 (Unreported).

64 *Id.* at para 20.

samples, soft tissues, hard tissues, hair, etc., from the dead body and preserved the same and in the course of investigation, could have sent them along with the admitted blood samples, etc., of the relatives, to the Forensic Science Laboratory to establish the identity of the dead body. No such efforts were made in this case. In the cases involving similar circumstances, all the investigating officers are required to subject the dead body for its proper identification by following the required procedures to conduct DNA test. The Director General Police shall direct all the Subordinate Officers, particularly the Investigating Officers, to collect the samples from the dead body, i.e., hair, tissues, blood, bloodstains, etc., and send them for DNA test for authentic identification of the deceased persons. The Registry is directed to communicate the copy of judgment to the Director General Police, State of Telangana and the State of Andhra Pradesh, who in turn, shall communicate the same to all their Subordinate Officers including the Investigating Officers for compliance.

In an alleged fake encounter, the deceased was identified by DNA match with parents in addition to identification of clothes and corroborating morphological features, density gradients and distribution of pattern of soil particles collected from the place of incident. Based on the presence of residue of fire ammunition, nitrate and lead around the bullet hole of T-shirt, the CFSL opined firing by the police party from very close range bracing base for conviction.⁶⁵ In yet another case, the putrefied dead body of an 18 years boy, who was killed after kidnapping for ransom, was recovered at the behest of the accused and identified by belongings found near dead body and DNA match with parents.⁶⁶ After deliberating on recovery under section 27 of the Indian Evidence Act,⁶⁷ the high court upheld the conviction but commuted death penalty to life imprisonment since the case did not fall in the category of the 'rarest of rare'. The High Court of Himachal Pradesh, in an appeal, upheld the conviction based on the corroborative evidence including matching DNA of the deceased extracted from the blood stain gathered from clothes of the accused in case of dacoity with murder.⁶⁸

65 *Jamalbhai Mohammadbhai Mehtar v. State of Gujarat* MANU/GJ/0909/2017.

66 *The State of Assam v. Sanjay Chandra* 2017 (4) GLT 1114.

67 In *State of Maharashtra v. Suresh* (2005) 5 Bom., C.R. 736, the Hon'ble Supreme Court had countenanced three possibilities under s. 27 of the Evidence Act: When an accused points out the place where a dead body and/or incriminating material was concealed without stating that it was concealed by himself. One is that he himself would have concealed it, second is that he would have seen somebody else concealing it and the third is that he would have been told by another person that it was concealed there. If the accused declines to tell the criminal court that his knowledge about the concealment was on account of one of the last two possibilities, the criminal court can presume that it was concealed by the accused himself.

68 *Gurpreet Singh @ Sonu v. State of Himachal Pradesh* available at: <http://indiankanoon.org/doc/36479278> (last visited on 18 March, 2019).

In another case, DNA was collected from chewing gum for collecting DNA for identifying the accused of kidnapping for ransom.⁶⁹

In the sensational *Arushi* murder case, an appeal was filed before the high court by the accused parents of the deceased against conviction for life time.⁷⁰ The gruesome double murder of an adolescent girl and male help in diabolic manner attracted media attention for a long time since correct identification of assailants and revelation of *modus operendi* remained a challenge. Initially the local police and subsequently the Central Bureau of Investigation conducted investigation and concluded the findings based on circumstantial evidence of the last seen theory. Suspects including the parents (doctor couple) were subjected to umpteen forensic techniques like brain mapping, narco-analysis, polygraph etc. to reveal the mystery behind blind murder. DNA profiling of the blood stained articles, fingerprint and footprint matching were also conducted in addition to cyber forensics of electronic gadgets and mobile phones used by the parents and other suspects. However, the line of investigation kept changing causing serious doubt on prosecution story. The allegation of tampering with the artefacts collected from crime scene especially blood stained pillow covers was raised by the accused. The medico-legal expert modified his statement beyond disclosure in the post mortem report regarding status of genitals of the deceased girl for supporting the prosecution story of sexual intercourse and consequent grave and sudden provocation for the parents to kill both the people. Allahabad High Court after discussing legal doctrines on circumstantial evidence arrived at the conclusion to acquit the accused since prosecution could not prove beyond reasonable doubt what actually happened in the house on the fateful night leading to double murder. Consequently invoking section 106 of the Indian Evidence Act could not be justified to uphold conviction. The presence of unknown third party who committed the crime could not be logically ruled out, observed by the high court.

The texture of soil helps investigation in multiple ways by linking the place of occurrence especially in sexual assault case commissioned in a field. The soil report being scientific in nature, falls in the purview of expert opinion under section 293 Cr. PC., therefore admissible as per provisions of section 294 Cr. PC.⁷⁰ The CCTV footage is yet another modern technological aid for human identification as appreciated by Delhi high court by observing that:⁷¹

In the present case, the court has itself seen the CCTV footage, and has travelled back in time to the time when the occurrence took place and thereby has seen the occurrence in the same position as that of a witness,

69 *Thawaria v. The State of Madhya Pradesh* available at: <https://indiankanoon.org/doc/35153915/> (last visited on 18 March, 2019).

70 *Supra* note 6.

70 *Ajju @ Ajay v. The State of Madhya Pradesh*, Crim. Ref. No. 1/2014 and Crim. Appeals, HC of MP, on 19 May, 2017.

71 *Md. Rashid v. State of NCT Delhi*, Crim. Appl. No. 771/2014, Delhi High Court, 3 May, 2017 (para 15).

who would have seen the occurrence, if he was present. There cannot be more direct evidence. This video recording which captures the occurrence would be per se and mostly discerningly reliable and compellingly conclusive evidence, unless its authenticity and genuineness is in question.

However, the court acknowledged the necessity of authenticity certification of electronic evidence under section 65-B as observed by the apex court that "... the secondary evidence of electronic record with reference to sections 59, 65- A and 65-B of the Indian Evidence Act as such is used as primary evidence under section 62 of the Indian Evidence Act and the same is admissible in evidence, without compliance with the conditions in Section 65-B of the Evidence Act."⁷² High Court of Delhi regarding section 65-B had observed that CCTV footage stored directly in the hard drive of a computer being self-generated without human intervention and hence, is not secondary evidence requiring certification under section 65-B.⁷³

The evidentiary value of tracker dog used during investigation was dealt by the Himachal Pradesh High Court in an appeal by the accused against imprisonment for life term for allegedly killing of a young girl and burying her dead body, which was exhumed by police after six months.⁷⁴ In *Razak Murtaza Dafadar v. State of Maharashtra*,⁷⁵ the evidence of tracker dog was discussed by the apex court. Dog expertise in sniffing is accepted in Canada and Scotland. In *R. v. Montgomery*,⁷⁶ the Court of Criminal Appeal ruled that the evidence of the constable, who handled the dog on its tracking and reported the dog's reactions, was properly admitted by describing the dog as 'a tracking instrument' and the handler was regarded as reporting the movements of the instrument, in the same way as traffic constable reporting on the behaviour of his speedometer. In the extant appeal the high court held that in the present state of scientific knowledge, evidence of dog tracking, even if admissible, is not ordinarily of much weight. Here, DNA collected from femur bone could not be amplified due to degradation and thus her identity could not be established beyond reasonable doubt, but presence of amelogenin (X) indicated that the bone belonged to a female. The conviction was *set aside* since prosecution failed to translate that mental disposition of the accused into evidence proving guilt beyond reasonable doubt. During 2017, DNA and other forensic tools were accepted by the courts for human identification in several other cases.⁷⁷

72 *Anvar P. V. v. P. K. Basheer* (2014) 10 SCC 473.

73 *Kishan Tripathi @ Kishan Painter v. The State of NCT Delhi* 2016 SCC OnLine Del 1136 : (2016) 230 DLT (CN) 3 (DB).

74 *Karan Thakur v. State of Himachal Pradesh* MANU/HP/1060/2017: 2018 (1) Shim LC57.

75 AIR 1970 SC 283.

76 1866 NI 160.

77 *Afsar @ Afsar Khan v. State of Karnataka* MANU/KA/3234/2017; *Dheeraj Kumar @ Sonu v. State of Punjab*, MANU/PH/1559/2017.

Consent for sexual conduct

Free and competent consent is the litmus test to differentiate nature of sexual act as offence or normal human conduct. This issue involves complexity and intricacies to be deciphered during investigation and a major cause of concern for prosecutrix who must prove that sexual act was non-consensual and enforced by the accused. The #MeToo campaign, brought out by *The New York Times* on 05 October 2017 for accusing Hollywood celebrated producer Harvey Weinstein for demanding alleged sexual favours from several cine actors, also raised the issue of consent by the defense.⁷⁸ In India also similar allegations of sexual harassment were raised by different professionals but countered either by denying the accusations or by taking plea of mutual consent.

In *Mahmood Farooqui v. State (Govt. of NCT of Delhi)*,⁷⁹ Delhi High Court reversed the conviction order of trial court based on 'confused consent' leading to benefit of doubt to the accused for alleged forcible oral sex upon a foreign student who was a Fulbright fellow for PhD from the Columbia University and was affiliated to the University of Delhi for conducting field work. Mahmood Farooqui, the accused, a noted Indian writer, Dastangoi performer and 'Peepli Live' fame film director was in contact with the prosecutrix for helping her academic pursuit. The high court observed that⁸⁰:

In an act of passion, actuated by libido, there could be myriad circumstances which can surround consent and it may not necessarily always mean yes in case of yes or no in case of no. Everyone is aware that individuals vary in relation to exposing their feelings. But what has to be understood is that the basis of any sexual relationship is equality and consent.

Sexual consent would be the key factor in defining sexual assault as any sexual activity without consent would amount to rape. Gender relations also influence sexual consent because man and woman are socialized into gender roles which influence their perception of sexual relationship. Recent trend suggests various models of sexual consent. The traditional and the most accepted model would be an "affirmative model" meaning thereby that 'yes' is 'yes' and 'no' is 'no' but there would be some difficulty in universal acceptance of the aforesaid model, as in certain cases, there can be an affirmative consent, or a positive denial, but it may remain dormant, which may lead to confusion in the mind of the other party.

78 Harvey Weinstein Paid Off Sexual Harassment Accusers for decades *The New York Times*, Oct 5, 2017. Available at: <https://www.nytimes.com/2017/10/05/us/harvey-weinstein-harassment-allegations.html> (last visited on 18 March, 2019).

79 *Mahmood Farooqui v. State (Govt of NCT of Delhi)* 2017 VIII AD (Delhi) 321 : 2018 Cri LJ 3457 243 (2017) DLT 310, 2017 (4) JCC2784.

80 *Id.* at para 85.

The State filed an appeal before Himachal Pradesh High Court against acquittal order in case of gang rape of a married woman.⁸¹ The prosecutrix could not timely report the incident due to threat to her life. She later disclosed to her husband after lapse of 45 days and subsequently gave birth to a child, although her husband had already undergone sterilization procedure. DNA test confirmed one of the accused as putative father of the child. The high court reversed the conviction by observing that it does not appear to be a case of sexual assault but that of consent. The defense has not argued the plea of consent, but court surprisingly extrapolated it to the extent that positive DNA report was brushed aside merely on the basis of certain procedural lapses during investigation like not conducting test identification parade.

DNA and other forensic evidence in sexual abuse

It is a poignant fact that females and children are more vulnerable to sexual violence from relatives and acquaintance than strangers. In an appeal regarding rape with nine years old minor, the Supreme Court has underscored that in more than 80% cases of sexual offences, perpetrators are known to the victims.⁸² The court further emphasized that the time is ripe to usher significant reforms in the criminal justice system and expressed that there is also a dire need to adopt a survivor-centric approach towards victims of sexual violence, particularly, the children, keeping in view the traumatic long-lasting effects on such victims.⁸³ The apex court referred to its earlier observations⁸⁴:

Seeking corroboration to a statement before relying upon the same as a rule, in such cases, would literally amount to adding insult to injury. The deposition of the prosecutrix has, thus, to be taken as a whole. Needless to reiterate that the victim of rape is not an accomplice and her evidence can be acted upon without corroboration. She stands at a higher pedestal than an injured witness does. If the court finds it difficult to accept her version, it may seek corroboration from some evidence which lends assurance to her version. To insist on corroboration, except in the rarest of rare cases, is to equate one who is a victim of the lust of another with an accomplice to a crime and thereby insult womanhood. It would be adding insult to injury to tell a woman that her claim of rape will not be believed unless it is corroborated in material particulars, as in the case of an accomplice to a crime.

Various constitutional courts in India have placed greater reliance on DNA and other forensic evidence for stitching offenders and their criminal conduct with greater

81 *State of Himachal Pradesh v. Suraj @ Surjit Singh* MANU/HP/0882/2017.

82 *State of Himachal Pradesh v. Sanjay Kumar @ Sunny* (2017) 2 SCC 51.

83 *Id.* at para 30.

84 *Id.* at para 31, referred from para 12 of *Bhupinder Sharma v. State of Himanchal Pradesh* AIR 200 SC 4684 : 2003 Supp(4) SCR 792.

precision in plethora of sexual abuse incidents. During this annual survey, series of cases were found adjudicated involving minors who were sexually abused by close family members including their fathers especially when mother had died earlier. The Bombay High Court upheld the conviction of father who repeatedly abused his minor daughter for gratifying sexual lust.⁸⁵ When pregnancy was detected at an advanced stage, he planned to kill the victim but could not succeed, and the prosecutrix gave birth to a child. DNA match held the accused as putative father and established the guilt beyond reasonable doubt. In yet another appeal, the same high court dismissed the appeal of 80 years old accused for attempted rape on a three year old toddler based on DNA match on the seminal stains found on her clothes despite there being no bodily injuries on the victim.⁸⁶ The same high court also dismissed another appeal for putting fingers in the genitals of an infant girl of five years causing bleeding injuries to her. The blood stain collected from the clothes of the accused and his nail clips matched with the victim by DNA test in addition to the medico-legal observations corroborate the allegation for upholding the conviction.⁸⁷

The apex court in catena of cases held that corroboration is exception in rape allegations but if the testimony of the prosecutrix does not inspire confidence and suffers from gross contradictions, then conviction cannot be based on her sole testimony.⁸⁸ The apex court in *Sunil v. State of Madhya Pradesh*,⁸⁹ held that conviction of the accused under section 376 of the penal code is also possible on the basis of other available evidence, and non-conducting of the DNA test or failure to match DNA profiling, would not necessarily result in collapse of prosecution case. A positive result of DNA test would constitute clinching evidence against accused, if however, result of test is in the negative, weight of other materials and evidence on record will still have to be considered. This ratio was observed by Delhi high court for refusing bail of the accused, who was an Afghan national, for committing gang rape.⁹⁰

High Court of Madhya Pradesh dismissed an appeal of the accused by observing that negative DNA report cannot be the sole basis for acquittal, if prosecutrix deposition is unswerving.⁹¹ During criminal revision against conviction of a co-accused of gang rape, the DNA report was not matching, hence police did not file charge sheet, but the trial court by exercising powers under section 319 Cr. PC summoned the applicant

85 *Rameshwar Shrawan Iwanathe v. State of Maharashtra*. Available at: <https://indiankanoon.org/doc/147134044/> (last visited on 18 March, 2019).

86 *Gulabrao v. State of Maharashtra*, 2017(6) MhLJ100.

87 *Sandip v. The State of Maharashtra* MANU/MH/3394/2017.

88 *Vijay @ Chinev v. State of Madhya Pradesh* (2010) 8 SCC 191.

89 (2017) 4 SCC 393.

90 *Sulaiman Ahmadi v. State of NCT Delhi* 2017 VIIIAD (Delhi) 646, 2017 (4) JCC 2264.

91 *Shailendra Dhakad v. State of Madhya Pradesh*, available at: <http://indiankanoon.org/doc/116476715/> (last visited on 18 March, 2019).

for trial and convicted after trial proceedings.⁹² The high court dismissed the revision by holding that negative DNA report alone cannot be sufficient ground for acquittal. However, in another case, negative DNA report in conjunction with testimony of prosecutrix suffering from infirmities became the grounds for quashing conviction order by High Court of Delhi.⁹³ In yet another case of alleged rape with a three years old girl child before same high court, DNA report was not negative but no opinion could be given due to non-availability of DNA profile of exhibits.⁹⁴ Delhi high court upheld the conviction citing *Ramnaresh v. State of Chhattisgarh*,⁹⁵ where DNA report was inconclusive but not negative, which could not provide any material benefit to the accused. In an appeal and reference of death penalty in a gang rape case, the High Court of Madhya Pradesh, upheld the conviction but remitted punishment to life imprisonment since the appellant could not offer any explanation as to how the semen and sperms were found in the vaginal swab and clothes of the rape survivor.⁹⁶

In an appeal filed by accused father against conviction for rape and impregnating his minor daughter, potency test was also reported positive, and semen slides of the accused were prepared. However, DNA test was not conducted by the prosecution, which became ground for appeal by the defense. The appeal was dismissed by High Court of Madhya Pradesh with observation that provisions under section 53-A of Cr.PC to collect blood samples for conducting DNA test was introduced with effect from 23.06.2006, hence for older cases non conducting test will not adversely affect the prosecution case.⁹⁷ This ratio was propounded by the apex court in *Krishna Kumar Malik v. State of Haryana*,⁹⁸ and also referred recently in *Mukesh v. State of NCT Delhi*.⁹⁹ Interestingly in majority of rape cases, DNA test is still not conducted, which needs attention, in the light of these judgements, to enforce legislative intent enshrined under section 53-A and 164-A of the Cr. PC.

The state filed an appeal against acquittal of trial court in gang rape case where prosecutrix turned hostile. High Court of Delhi ignored matching DNA report to uphold acquittal order despite refusal of the accused persons for attending test identification parade (TIP).¹⁰⁰ Defense had neither beseeched for consensual sex or forced collection of semen of the accused, nor claimed any enmity. Matching DNA report and other cogent factors may not be brushed aside merely based on hostility of the victim. Further

92 *Ibid.*

93 *Neeraj v. State Govt. of NCT of Delhi* MANU/DE/5317/2017. Also see: *State of Gujarat v. Jayantibhai Somabhai Khant* 2015 Cri.LJ 3209.

94 *Seesh Pal v. State of NCT*, 2017 SCC OnLine Del 11880.

95 (2012) 4 SCC 257.

96 *In Reference v. Vinay* MANU/MP/0555/2017.

97 *Ramnath Burman v. The State of Madhya Pradesh* MANU/MP/0143/2011.

98 (2011) 7 SCC 130.

99 *Supra* note 7.

100 *State v. Brij Mohan @ Birju 2018 X AD* (Delhi) 595, MANU/DE/2579/2017.

denial of the accused to participate in TIP appears to be overlooked during judicial appreciation. *Prima facie* this judicial approach jeopardise the ratio enshrined by the three Judges Bench of the Supreme Court in *Sunil v. State of Madhya Pradesh*.¹⁰¹ In other case, the accused filed an appeal against death penalty for repeatedly assaulting his 17 years daughter for satisfying his sexual lust and impregnating her.¹⁰² The accused administered her some medicines, consequently she delivered a baby girl. The accused threw the neo-natal girl child in a pond, where she died due to drowning. During biopsy, DNA sample was collected from the corpse, the expert opinion established the accused and prosecutrix as biological parents of the neo-natal deceased. The death sentence was remitted by the high court to life imprisonment to serve a minimum 30 years in jail.

In a case of gang rape, the provisions under the Protection of Children from Sexual Offences (POCSO) Act, 2012 could not sustain since prosecution failed to prove the age below 18 years of the rape survivor. However, the trial court convicted the accused based on evidence including positive chemical examination test for semen stains on the inner garments. During appeal, the high court set aside the conviction holding several vital contradictions in prosecution case especially no mark of injury on the person of the victim.¹⁰³ Here issue remained that there is no mention of any enmity between accused and the complainant which could hint at false implication. DNA analysis of semen stains would have played significant role to facilitate justice in such cases. Absence of injuries on the person of the prosecutrix is no ground for exoneration, as firmly established by the apex court. Similarly Bombay High Court reversed the conviction order of trial court based on contradiction and inconsistencies in the testimony of the witnesses in case of brutal murder of a minor girl of 14 years after rape by her brother-in-law.¹⁰⁴ Several bite marks on the face and breast were matched with the accused as opined by the odontologist. In this case also DNA was not conducted and court did not comment on the lackadaisical approach of investigation. The Allahabad High Court in *Dr. Kuldeep v. State of Uttar Pradesh*¹⁰⁵ held that a magistrate has the authority to interfere in crime investigation, if it is not progressing in a proper or fair manner. Referring to *Sakiri Basu*¹⁰⁶ and *Lalita Kumari*,¹⁰⁷ the High Court observed, “This court is certainly of the view that magistrate is all

101 *Sunil v. State of Madhya Pradesh*, (2017) 4 SCC 393. Also see *Madan Lal v. State of J&K*, AIR 1998 SC 386

102 *Shyam v. The State of Madhya Pradesh* MANU/MP/0073/2017.

103 *Luna Khan v. State of Rajasthan*, available at: <https://indiankanoon.org/doc/145040997/> (last visited on 18 March, 2019).

104 *Irfan @ Afroz v. State of Maharashtra*, Cri. Appl. No. 64 of 2015, Bombay High Court, 6 Sept 2017 (Unreported).

105 2016 SCC OnLine All 722.

106 *Sakiri Vasu v. State of Uttar Pradesh* (2008) 2 SCC 409.

107 *Lalita Kumari v. State of Uttar Pradesh* (2014) 2 SCC 1.

empowered to monitor the investigation and, in case it is required, then proper direction may also be issued.” In fact judiciary must insist, in the interest of justice, to ensure DNA test in rape incidents as enshrined under section 53-A and 164-A of Cr. PC.

Determination of age of minor victim

The burden of proof lies on the prosecution to prove age of the prosecutrix below 18 in order to invoke provisions under the POCSO Act, 2012. In dual appeal by the state and the accused in *State NCT of Delhi v. Mohan*,¹⁰⁸ Delhi high court referred *Jarnail Singh v. State of Haryana*,¹⁰⁹ where the apex court has extended scope of the Rule 12(3) of the Juvenile Justice (Care and Protection) Rules, 2007 to enquire about the age of the rape victim.¹¹⁰ The apex court observed that¹¹¹:

On the issue of determination of age of a minor, one only needs to make a reference to Rule 12 of the Juvenile Justice (Care and Protection of Children) Rules, 2007 (hereinafter referred to as the 2007 Rules). ... Even though Rule 12 is strictly applicable only to determine the age of a child in conflict with law, we are of the view that the aforesaid statutory provision should be the basis for determining age, even for a child who is a victim of crime. For, in our view, there is hardly any difference in so far as the issue of minority is concerned, between a child in conflict with law, and a child who is a victim of crime.

An entry relating to date of birth made in the school register is relevant and admissible under section 35 of the Indian Evidence Act, 1872,¹¹² but the entry regarding

108 MANU/DE/1766/2017.

109 (2013) 7 SCC 263. Also see: *Mahadeo s/o Kerba Maske v. State of Maharashtra* (2013) 14 SCC 637; *State of Madhya Pradesh v. Anoop Singh* (2015) 7 SCC 773 : 2015 (7) SCALE 445.

110 Rule 12(3) of the JJ Rule 2017: In every case concerning a child or juvenile in conflict with law, the age determination inquiry shall be conducted by the court or the Board or, as the case may be, the Committee by seeking evidence by obtaining

(i) the matriculation or equivalent certificates, if available; and in the absence whereof;

(ii) the date of birth certificate from the school (other than a play school) first attended; and in the absence whereof;

(iii) the birth certificate given by a corporation or a municipal authority or a *panchayat*;

(b) and only in the absence of either (i), (ii) or (iii) of clause (a) above, the medical opinion will be sought from a duly constituted Medical Board, which will declare the age of the juvenile or child. In case exact assessment of the age cannot be done, the Court or the Board or, as the case may be, the Committee, for the reasons to be recorded by them, may, if considered necessary, give benefit to the child or juvenile by considering his/her age on lower side within the margin of one year. and, while passing orders in such case shall, after taking into consideration such evidence as may be available, or the medical opinion, as the case may be, record a finding in respect of his age and either of the evidence specified in any of the clauses (a) (i), (ii), (iii) or in the absence whereof, clause (b) shall be the conclusive proof of the age as regards such child or the juvenile in conflict with law.

111 *Supra* 109 at para 20.

112 The apex court in *Birad Mal Singhvi v. Anand Purohit* (AIR 1988 SC 445) held that “To render a document admissible under Section 35, three conditions must be satisfied, firstly, entry that

the age of a person in a school register is of not much evidentiary value to prove the age of the person in the absence of the material on which the age was recorded. In an appeal against life imprisonment of the maternal uncle of the minor prosecutrix who got impregnated, Delhi High Court observed that the determination of age by ossification test is neither absolute nor exact.¹¹³ It has also been expressed in a leading commentary that the error in the case of age based on ossification test may be three years.¹¹⁴ However, DNA linkages helped the court to uphold the conviction and appeal was dismissed.

In an appeal against conviction order of the trial court, the Bombay High Court acquitted the accused by observing that “Once the exact age is not proved, on the available evidence as brought on record the defence of the appellant that prosecutrix was a consenting party is not completely ruled out. Therefore, in my view, even DNA report will not be helpful to the prosecution”.¹¹⁵ In the instant case, the prosecution could not prove the prosecutrix as minor. Irrespective of age, the victim consented on false promise of marriage and DNA established beyond any doubt that accused is putative father. In such cases, the social issue warrants attention as to whether a tender age girl be allowed for sexual exploitation on false pretext of marriage.

Sexual abuse of mentally challenged females

Protection of mentally and physically challenged persons from sexual abuse must be at the top priority for responsive government. It is observed that mentally challenged females and children are more vulnerable to sexual exploitation, and many a times such incidents go un-reported till advanced stage pregnancy of the victim and by then it becomes medically compelling to get the baby delivered. In such cases, DNA and other forensic tools are vital to corroborate the guilt with credible identification of the culprits. In addition, section 164(5A) (b) of Cr. PC and section 137 of the Indian Evidence Act safeguard the interest of the mentally unsound witness. During annual surveys, in the recent past, rising trend of such incidents has been noticed.

In an appeal, a public spirited doctor raised pivotal issue by filing a special leave to interpret section 2(d) of the POCSO Act, 2012 with regard to definition of a child based on mental age for protecting the best interest of the mentally challenged persons

is relied on must be one in a public or other official book, register or record, secondly, it must be an entry stating a fact in issue or relevant fact; and thirdly, it must be made by a public servant in discharge of his official duty, or any other person in performance of a duty specially enjoined by law”. (para 15).

113 *Tara Chand v. State (Govt. of Nct) of Delhi* MANU/DE/7907/2017.

114 Jaising P.Modi and C A Franklin, *Modi's Textbook of medical jurisprudence and toxicology* 40 (N.M. Tripathi, 21st edn. Bombay, 1988).Also see, *Balasaheb v. The State of Maharashtra* 1994 CrI. L.J. 3044, at para 25; *Srilatcha Kumari v. State of Orissa*, (1993) 6 O.L.R. 661 and *Bishnudas v. State of Orissa* (1996) 11 O.L.R. 602.

115 *Ravindra v. State of Maharashtra*, Crim. Appeal No 445 of 2015, Bombay High Court, decided on 12 July, 2017(para 14) (Unreported).

to safeguard them from sexual abuse.¹¹⁶ The biological age of the prosecutrix in the extant case was 38 years but she had mentally not grown beyond six years, as certified by the medical experts of the AIIMS, New Delhi. The apex court at length discussed the issue, but decided not to intervene since it is the domain of the legislature to define a child based on mental understanding (functional age) in addition to biological or chronological age. It appears that the apex court has missed an opportunity to extend protection to the mentally challenged persons. The court by using powers under article 142 of the Indian Constitution, would have injected life to the words constituting the fulcrum of the spirit of progressive legislation especially designed for protection against sexual exploitation of children and weaker sections. This interpretation would not have added any burden on the State rather paved the way for fast track justice for mentally challenged victims by providing the umbrella shield of the victim-friendly safeguards enshrined under the POCSO Act such as special procedures for recording statement of a child victim under sections 24 to 27, in addition to section 30 of the Act, 2012 which shifts burden of proof on the accused for proving his innocence to create deterrence of law. In India, mentally disabled females not only suffer from sexual abuse but also face privation for bearing burden of unwanted pregnancy. In criminal legal lexicon, the intent of the legislature is clear to decide childhood based on mental understanding, which is commuted with chronological or biological age for determining culpability.¹¹⁷ Mental age grows with biological age under normal circumstance, but for mentally abnormal persons, extra-ordinary legal measures are not charity but stark necessity for safeguarding the rights of 'vulnerable' population of this community.

The apex court of India, in the case mentioned above, has also referred few judgements of foreign jurisdictions. The Supreme Court of Africa observed that the Amendment section 68 of the Act 32 of 2007 has included not only witness who were biologically under age of 18 but also those who were mentally under the age of 18.¹¹⁸ The apex court of South African in *S v. Dayimani* observed that:¹¹⁹

By definition, common law rape is the unlawful and intentional sexual intercourse by a person without the consent of the other. Consent has to be free, voluntary and consciously given in order to be valid. In our law, valid consent requires that the consent itself must be recognised by law; the consent must be real; and the consent must be given by someone capable of consenting. The first two requirements do not need to be discussed since the issue is whether the complainant was capable

116 *Ms Eera Through Dr. Manjula v. State (Govt. of NCT Delhi)* MANU/SC/0876/2017 : 2017 SCC OnLine SC 787.

117 Ss. 82 - 85 of the Indian Penal Code.

118 *Daniel Johannes Stephanus Van Der Bank v. The State* [2014] ZAGPHC 1017.

119 [2006] ZAECHC 22.

of giving consent “ related to the third requirement. Where a person in intellectually challenged, his or her condition must be expertly assessed and only then can a finding as to such capability be made.

The Supreme Court of Canada in the *Queen v. D.A.I.*¹²⁰ dealt with testimonial competence of mental disabled witness under section 16 of the Canada Evidence Act. The victim of rape was about 26 years old but having mental age of 6 years. The trial court acquitted the accused, which was confirmed by the Court of Appeal. The apex court by majority judgement allowed the appeal and *set aside* the acquittal and directed for conducting new trial. A reference was made to supplement section 16(3) by enabling an adult witness with mental disability.

In an appeal before High Court of Bombay, the age of mentally challenged rape survivor was 17 years at time of incident as claimed in FIR, but trial court dropped the charges under the POCSO Act, since prosecution could not establish age of the prosecutrix below 18 years.¹²¹ However, the accused was convicted under section 376(2) and other provisions of the penal code. The high court upheld the conviction order. In fact the victim suffered due to lackadaisical approach for not conducting age determination during investigation, and court maintained conspicuous silence. The apathy of prosecution was obvious in not preferring appeal against the order of trial court to drop charges under the POCSO Act. This situation needs attention of law makers and enforcers to ensure scientific investigation for advancing fairness in justice delivery.

The High Court of Karnataka in an appeal against conviction order of trial court acquitted the accused of rape with a 26 years old deaf, dumb and mentally retarded girl. Medico-legal examination conducted by female medical practitioner reported her to be 76% physically, visual, speech and hearing disabled and she was reported to have hymen freshly torn with marks of bleeding but no mark of injuries.¹²² No seminal or blood stains were found on the clothes of the victim, as she was not wearing inners garments. The victim also identified the accused in test identification (TI) parade and confirmed allegation of rape before magistrate under section 164 of Code of Criminal Procedure and recorded in Compact Disc (CD). The law provides that if the person identifying the person arrested is physically or mentally disabled, such process of identification shall take place under the supervision of a Judicial Magistrate to ensure appropriate steps necessary for the process and the TI parade must also be video-graphed.¹²³ Section 119 of the Indian Evidence Act, 1872 deals with recording evidence

120 [2012] 1 RCS 149.

121 *Dasu v. State of Maharashtra* MANU/MH/1928/2017.

122 *Shrikantgouda v. The state of Karnataka* MANU/KA/2236/2017.

123 S. 12 of the Criminal Law (Amendment) Act, 2013. (Act No 13 of 2013, came into effect from 03.02.2013).

by dumb witness.¹²⁴ Medical expert deposed during trial that despite negative FSL report, possibility of rape cannot be ruled out since the hymen was found freshly ruptured with indication of bleeding. However, during course of cross-examination of medical expert, it was said that blood collected during menses period may lead to tear of the hymen. Despite cogent forensic and oral evidence, the conviction was reversed based on presumptive medical expert opinion. Indeed jurisprudence of mentally challenged victims of sexual abuse needs in-depth study and deliberations.

The High Court of Bombay dismissed the appeal against conviction for gang rape by a car driver and his friends with a blind woman when she was travelling with her husband who was also blind. Despite the visual limitation of the victim, presence of independent witness on crime scene to identify the culprits and matching of the DNA profile of the accused persons with vaginal swab helped the court in upholding the conviction.¹²⁵

False promise to marry and sexual exploitation

DNA and other forensic evidence have plausibly corroborated allegations of sexual abuse of women by alluring them with false promise to marry. High Court of Delhi dismissed the appeal of the accused but remitted the quantum of punishment to five years for having sexual relationship with prosecutrix on false promise to marry.¹²⁶ The DNA linked the accused as putative father of the child born to the prosecutrix. The court also ordered the accused to pay rupees five lacs as compensation to the victim.

Potency test and issue of self-incrimination

In a revision petition filed before High Court of Andhra Pradesh, the accused petitioner contended that potency test intrudes into personal liberty and privacy since it involves invasive and oppressive medical procedures; and also violates the rights enshrined under Article 20(3) of the Indian Constitution.¹²⁷ In a domestic harassment and demand of dowry case, the wife alleged that her marriage could not be consummated since her husband suffers from erectile dysfunction (ED) and was unfit for marital life. The high court, after deliberating upon several verdicts of the apex court, held that "... although it is sufficiently clear that having regard to the mandate of article 21 of the Constitution of India the process of collecting samples for

124 S. 119 of the Indian Evidence Act: Dumb witnesses: A witness who is unable to speak may give his evidence in any other manner in which he can make it intelligible, as by writing or by signs; but such writing must be written and the signs made in open Court. Evidence so given shall be deemed to be oral evidence.

125 *Maruti Suresh Pavale v. The State of Maharashtra* MANU/MH/0684/2017.

126 *Akshay Kumar v. State of NCT Delhi* MANU/DE/0781/2017.

127 *Naveen Krishna Bothireddy v. State of Telangana*, Andhra High Court, 2017 (1) ALT (Cri) 422 (A.P.).

conducting tests should be fair and reasonable, however, it does not imply that the accused can dictate the course an investigation is going to take.¹²⁸ The court further observed that¹²⁹:

Even in Selvi case, it is clearly observed that — the rule under Article 20(3) of the Constitution of India against the testimonial compulsion, however, does not prohibit collection of material evidence, such as bodily substances and other physical objects and the statement used for comparison with facts already known to investigators. To ascertain whether the statement is incriminatory, depends upon the use to which it is put. The distinction, whether the statement is inculpatory or exculpatory is to decide at the stage of trial, whereas the Right to remain silence is available even at the stage of investigation in a criminal case.

The high court in the instant case allowed potency test and dismissed the revision petition since the notion of ‘personal liberty’ does not grant right in the absolute sense and the validity of restrictions placed on the same needs to be evaluated on the basis of criterion such as ‘fairness, non- arbitrariness, and reasonableness’. In *Sharda v. Dharampal*,¹³⁰ the apex court held that a person’s right to privacy could be justifiably curtailed if it was done in light of competing interests of ‘personal liberty’ and ‘public safety’. Article 20(3) protects an individual’s choice between speaking and remaining silent, irrespective of whether the subsequent testimony proves to be inculpatory or exculpatory. Article 20(3) aims to prevent the forcible ‘conveyance of personal knowledge that is relevant to the facts in issue’. The results obtained from each of the impugned tests bear a ‘testimonial’ character and they cannot be categorised as material evidence.

Forensic corroboration in Property offences

Like in western countries, Indian courts have also placed reliance on DNA to adjudicate on property offences. DNA collected from the envelop delivered by the accused also assisted the Bombay High Court to uphold conviction in a case of dacoity in addition to other corroborative evidence like identification of accused in test identification parade and recovery of stolen property under section 27 of the Indian Evidence Act on the instance of the accused.¹³¹ DNA must be used extensively in India for crimes other than body offences.

DNA in proving innocence

False allegations and wrongful convictions in criminal administration are widely prevalent and India is no exception. DNA, since its inception, has emerged as a potent forensic aid to establish the truth and helped in exonerating falsely implicated innocent

128 *Id.* at para 16.

129 *Id.* at para 19.

130 AIR 2003 SC 3450.

131 *Mr. Vishal @ Dadu v. State of Maharashtra* MANU/SC/0104/2017.

and bringing guilty persons before law. A criminal appeal was filed by the accused of rape before the apex court against high court order for rejecting the application under section 482 of Cr.PC.¹³² During investigation it surfaced that the accused and the husband of prosecutrix had business transactions and disputes of financial matters were pending in district court. The medico-legal examination of the prosecutrix got delayed due to initial denial of her consent. Medical report could not support allegations of sexual assault or presence of spermatozoa in vaginal smear. However, the prosecutrix remained firm in alleging gang rape in her statement before magistrate recorded under section 164 of Cr.PC. Investigation was concluded by filing closure report with observation that except section 164 of Cr.PC statement, there is no evidence for supporting her allegations and the court may initiate legal action against the complainant under section 182 of Cr.PC. The trial court allowed protest petition of the complainant again in compliance of directions of the High Court and summoned the accused. The apex court referred the *Prashant Bharti v. State (NCT of Delhi)*¹³³ and quashed the judgement of the high court including the entire criminal proceedings for saving the accused from malicious prosecution.

In an appeal against conviction for alleged rape with a minor girl, DNA test could not match with the accused.¹³⁴ The ossification test of the prosecutrix was not conducted. Subsequently, it surfaced that another person (driver) committed sexual intercourse with the prosecutrix in the hospital just before the medical examination was conducted, for the purpose of falsely implicating the accused, but prosecutrix did not disclose these facts during investigation. The conviction was *set aside* and a separate FIR against driver was lodged based on DNA report confirming his sperms present on the vaginal swab of the prosecutrix.

In yet another case of alleged rape and pregnancy of a minor girl, no bodily injuries or indication of recent sexual activity was reported on the person of the prosecutrix by the medico-legal expert.¹³⁵ DNA excluded the accused from being biological father of the aborted foetus. The high court allowed the appeal by giving benefit of doubt in favour of the accused. Similarly, in case of alleged repeated rape by the father, medico-legal examination revealed that prosecutrix was carrying in her womb a dead foetus of over nine weeks.¹³⁶ On medical advice abortion was conducted and foetus content was seized for forensic analysis. Spermatozoa were detected in vaginal swab but DNA report was inconclusive. The mother of the prosecutrix also refuted the version of her daughter. The defense argued that the prosecutrix was caught

132 *Vineet Kumar v. State of Uttar Pradesh* 2017 (4) SCALE 292.

133 (2013) 9 SCC 293.

134 *Kuldeep Singh v. State of Himachal Pradesh* MANU/HP/0575/2017.

135 *Dadakhallandar v. State of Karantaka* MANU/KA/1397/2017.

136 *Hem Raj v. State of Punjab* MANU/PH/1560/2017.

in compromising position with some persons by her father and other family members. Other evidence also supported this argument in addition to non-matching of DNA from vaginal swab and foetus with the accused father. It also surfaced that she was in relationship with a boy whom she wanted to marry but the marriage could not materialise due to social reasons despite engagement ceremony having been solemnized. Fair appreciation of evidence including non-conclusive DNA report could help the high court to allow the appeal in order to bring justice to the accused father against wrongful conviction by the trial court.

Legal conundrum on voice matching

Matching of voice for connecting crime with criminals has emerged as potent forensic tool. Two judges Bench of the Supreme Court of India, in *Ritesh Sinha v. State of Uttar Pradesh*,¹³⁷ has pronounced conflicting views on the legal issues dealing with voice spectroscopy test (VST). The legal issues involved were (i) whether calling upon the accused to lend his voice sample tantamount 'to be a witness against himself' violating Article 20(3) of the Indian Constitution, and (ii) in absence of specific provisions under law, can a magistrate authorise the investigating agency to record the voice sample of the accused? This case is *sub judice* before the larger Bench of the apex court. The constitutional courts in India, from time to time, have propounded conflicting views on these legal issues.

However, during 2017 several cases regarding permission of magistrate for collection of voice samples from the subjects by the investigating agencies were dealt by various high courts across India.¹³⁸ Flagging the similar legal issues, an appeal was filed before the Gujarat High Court.¹³⁹ The court referred *Ashok Sadarangani v. Union of India*,¹⁴⁰ where it was held that if the matter is *sub-judice* before the apex court, there is no legal embargo in deciding the matter. The high court observed that section 311A of the Cr.PC empowers the magistrate to direct any person including an accused person to give specimen signature or handwriting. Section 5 of the Identification of Prisoners Act, 1920 enables the magistrate to direct any person, for the purpose of investigation or proceedings under the Cr. PC. 1898 to give his measurement¹⁴¹ or photograph. The Law Commission of India has also recommended for incorporating voice sample under the ambit of section 5 of the Act, 1920.¹⁴² Indeed existing legal regime in India has no explicit mention of judicial power to direct the subject for

137 (2013) 2 SCC 357.

138 *P. Kishore v. State represented by SP CBI, Chennai* 2017 SCC OnLine Mad 10638; *Amit Khetawat v. State of Telangana*, 2017 SCC OnLine Hyd 101; *Jayapaul Mohan v. State of Tamil Nadu*, 2017 SCC OnLine Mad 36436.

139 *Natvarlal Amarshibhai Devani v. State of Gujarat* CDJ GHC 028.

140 (2012) 11 SCC 321.

141 S. 2(a) of the Act, 1920 defines 'measurement' as including 'finger impression' and foot print impression.

142 Law Commission of India, 87th Report on Identification of Prisoners Act, 1920, (1980).

providing voice sample for forensic analysis. The high court, after discussion on various relevant legal precepts and several judicial pronouncements of Indian courts and other jurisdictions, directed the state government to frame the rules as earliest under section 8 of the Act, 1920. Matching of voice sample has gained vital evidentiary significance especially for handling heinous offences such as ransom, corruption and other white collar crimes. The apex court must decide expeditiously the pending case referred above to settle the legal conundrum involved therein.

IV CONCLUSION

Since long forensic intervention in judicial arena has proved its credence for corroboration but its use continues to be optional for investigating agencies especially in criminal matters. In many cases the accused get acquitted for want of proof to hold guilty beyond reasonable doubt. In body offences like rape, DNA would be a credible evidence for ensuring justice for both victim and accused. Despite sections 53-A and 164-A of Cr. PC in place, 'cherry picking' approach at the level of investigation keep continuing for collecting DNA samples in rape incidents. Judiciary also maintains conspicuous silence on gross derelictions and blatant violations of explicit legal provisions by the investigating agencies with regard to collection of physical and other evidence. It is a dire need, considering rising trend of sexual violence in India, to introduce legal provisions under the code of criminal procedures to conduct DNA and other scientific tests mandatorily and not as matter of choice left to police. For enabling fullest use of forensic inputs, overhauling of relevant legal provisions on expert opinion including sections 53-A, 54-A, 293, 311-A of Cr.PC, and sections 45 and 73 of the Indian Evidence Act, 1872 etc. is wanted.

The mentally challenged victims of sexual assaults irrespective of their biological age must be dealt in accordance with mental age so that such incidents covered under statutory rape enshrined under the POCSO Act, 2012, since this class of victims may not be competent to consent for sexual act. It is needed to deploy more empowering and inter-sectional right-based framework for enabling rights of disabled persons for protection against sexual offences. DNA led paternity determination of the child born within lawful wedlock is contrary to existing legal provisions under section 112 of the Indian Evidence Act, 1872 since it contradicts the best interest of a child by branding her/him 'fatherless'. This matter is referred to larger bench of the apex court and it is urged to decide on priority. Determination of maternity, considering the increasing use of surrogacy and other scientific aids to reproduction, must be introduced by amending section 112 of the Act, 1872. Indeed a detail study is desired to examine umpteen tenets affecting family laws after the advent of third party intervention by way of assisted reproduction.

The legal answers of modern socio-economic complexities may not be addressed merely by interpretation of century old legislative intent rather both substantive and procedural laws must be re-defined for addressing pressing realities of contemporary society. For making 'corruption free India', the criminal law needs to be suitably amended for enabling a magistrate for ordering collection of voice sample from the

suspect during course of investigation. Voice sample must be introduced under section 311-A of Cr.PC in addition to handwriting or signature alongwith amendments in other legal statutes for the purpose of comparison of voice to save time of higher judiciary for dealing unwarranted litigations. Several such issues in field of forensics need legislative and judicial attention. At present, forensic aids are meant for prosecution since police on behalf of the State becomes *suo motu* custodian of crime scene and other artefacts, and accused has no say in this regard. In the interest of equitable justice, the accused must also be given opportunity, as a matter of right, to suggest for conducting forensic tests during investigation to prove his innocence.

Further an inter-disciplinary approach to learn fine nuances of forensic sciences by law practitioners and judiciary on one hand and legal knowledge to forensic experts on the other hand must be facilitated by way of suitably designing the academic course curricula in addition to conducting in-service training on periodical basis. Periodical training on scientific skills for investigators is long awaited. Public awareness on maintaining sanctity of crime scene etc must be promoted to advance greater use of forensics in justice system. The government must prioritise for strengthening forensic facilities, and the annual budget for police modernisation must be apportioned for technological up-gradation of investigation standards. In deed there is need to strength forensic jurisprudence for enabling scientific aids to investigation in Indian judicial system.

